

# MEDICAL JOURNAL OF AUSTRALIA

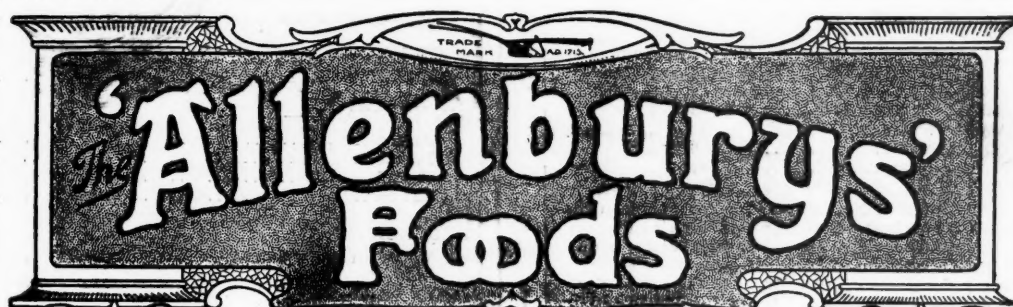
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VOL. I.—3RD YEAR—No. 14.

SYDNEY: SATURDAY, APRIL '1, 1916.

PRICE 6D.



**ALLEN & HANBURY LTD.** desire to draw the attention of Medical Men to the undermentioned comparison of the "Allenburys" Milk Foods No. 1. and No. 2, when mixed according to the directions, with Human and Cow's Milk.

	Cow's Milk.	Human Milk.	Prepared as Directed.		Cow's Milk and Water Equal parts (a)
			The Allenburys' Milk Food No. 1.	The Allenburys' Milk Food No. 2.	
<b>Fat</b> ... ..	<b>3.0</b>	<b>3.5</b>	<b>3.33</b>	<b>3.06</b>	<b>1.5</b>
Casein ... ..	3.0	1.0	1.12	1.0	1.5
Albumen ... ..	0.5	1.2	1.00	0.81	0.25
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Water ... ..	88.3	87.8	83.68	83.65	95.0

(a) The strength usually given to a young infant.

NOTE—It will be noticed that the proportion of Casein in Cow's Milk is greatly in excess, whilst the Albumen and Lactose are deficient. No dilution of water can correct this. When cream is added to diluted milk the proportion of fat can be made correct, but the deficiency of Milk Albumen and Lactose is still further exaggerated.

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Refer to Note issued by Dr. Robert Hutchison to face Page 470 of his book, "Food and the Principles of Dietetics," Third Edition, Revised and Enlarged, Second Impression, 1913.

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Sodium Carbonate .. .. .	7 "

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# THE MEDICAL JOURNAL OF AUSTRALIA.

VOL. I.—3RD YEAR.

SYDNEY: APRIL 1, 1916.

No. 14.

## SURGICAL EXPERIENCES AT THE WAR.

By G. A. Syme, M.B., M.S. (Melb.), F.R.C.S. (Eng.),  
Late Lieutenant-Colonel A.M.C., A.I.F.

I acceded very reluctantly to a request to speak on "Surgical Experiences at the War." The medical journals are full of such experiences, and I felt that I could add nothing to what has been already contributed on the subject. Indeed, my observations can have exceptionally little value, because my period of active work at the front was so short and so limited, and also because the cases passed so quickly out of observation that no information can be given as to their progress and final result. Further, owing to the stress of the work at the time, it was impossible to take notes or to compile statistics.

It may be assumed that the principles of surgery must be the same in war as in civil life. It is the conditions under which they are put in practice that are different. The conditions on H.M. Hospital Ship *Gascon* for dealing with those wounded at the landing and fighting at Gallipoli on April 25 were as favourable as possible. The *Gascon* was well equipped with a good operation theatre, having full provision for sterilization; a fair supply of ordinary instruments and apparatus; and a good X-ray plant. The staff consisted of the Officer in Command, Lieutenant-Colonel Huy, who was Professor of Surgery at Lahore, and a most excellent surgeon and operator, three majors and one captain, all belonging to the I.M.S., and two Hindus of the subordinate Indian Medical Service, one of whom gave anaesthetics, and had charge of the X-rays department. The nursing staff consisted of a matron and seven sisters, with a number of R.A.M.C. orderlies, and also Indian attendants. The *Gascon* was fitted up for 350 patients. By putting mattresses in the smoking room and on the floors, hatchings and decks, we arranged to accommodate 150 more, and actually took on board 540. The ship was anchored about half a mile from the shore. The landing took place about 2 a.m., and we began to receive the wounded at about 9 a.m. Many were shot in the boats, and as they landed on the beach; others as they climbed up the cliffs. Those received first had rifle and machine gun bullet wounds, as the Turks did not get their battery and shrapnel on to the beach for some time. Thus the conditions were much more favourable than those obtaining in France and Flanders, where the men have been long in the trenches and all the wounds are badly infected, and where it takes a considerable time to transport them to a base hospital. We had the equivalent of a well-equipped base hospital practically close to the firing line.

Many of the rifle and machine gun bullet injuries were not the clean, penetrating wounds one expected

to see, but presented a great deal of laceration. The bullets seemed always to turn over. The first cases we operated on were those in which hæmorrhage had occurred and tourniquets had been applied on shore. Of course, nearly all the men had received some first-aid dressing on shore, from the regimental surgeons and orderlies. By the afternoon the Clearing Hospital had landed, and was working. In some of the cases the damage to limbs was so great that amputation was the only possible treatment. Flap amputations were done in all cases, and up to the time of disembarkation all did well.

The routine treatment for cases where an attempt was made to save limbs with much laceration of soft parts and comminution of bone whether from rifle or shrapnel, was, under a general anaesthetic, to sterilize the skin with benzene and iodine, to make free incisions to expose the tracks of the wound thoroughly, to ligature divided vessels, and to cut away damaged fascia and muscle with knife and scissors, to remove detached and badly damaged fragments of bone, to wash every nook and cranny of the wound thoroughly with peroxide of hydrogen lotion, then with biniodide of mercury lotion, and to dust the whole of the wound surface with a powder of salicylic and boric acid. Drain tubes were inserted in dependant positions. No sutures were used. A voluminous dressing of sal alembroth gauze and wool was applied, and then suitable splints. Under this treatment, a profuse, blood-stained, watery discharge occurred from the open wound, necessitating frequent dressing, but it was hoped, washing out the infection. Up to the time of disembarkation, the majority of the wounds dressed in this way remained sweet. In a few, gangrene set in, and amputation was performed. In one case of very lacerated wound near the shoulder, gas gangrene set in almost immediately, and spread rapidly on to the chest and trunk; the patient died in spite of free incisions and the pumping in of hydrogen peroxide. I think this case, however, occurred in our second trip, after the men had been in trenches for a week, and was a shrapnel wound. The cases seen then had been wounded a longer time before being sent on board, and were much more infected.

Owing to the arrangements of the cots and beds and the want of appliances and attendants, continuous irrigation methods were not practicable. Nearly all the fractures were very badly comminuted, and those of the femur especially were very difficult to manage. We had not much variety in splints, and it was almost impracticable to apply efficient extension owing to the arrangement of the cots. We got the best results with extemporized splints of perforated zinc, but had often to use wooden splints to get fixation. We had no Lane's plates or instruments, and could not plate these fractures, though it is doubtful if it would have been good practice to do so.

The experience of the Boer and Russo-Japanese war was in favour of treating penetrating abdominal wounds expectantly. The first case operated on the *Gascon* showed a condition, it seemed to us, that must prove fatal if left alone. The patient had been wounded, eight hours previously, by a bullet entering on the left trochanter and emerging below the ribs on the right. He had retention of urine, and when catheterized the urine was full of blood. His abdomen was rigid and tender. He had great abdominal pain and considerable shock. On opening the abdomen, it was found to be full of blood, urine and fæces; there was an extra-peritoneal wound of the bladder near the base, and an intra-peritoneal wound on the right upper side, while several coils of small intestine were much lacerated. The damaged portion of bowel was resected, the intra-peritoneal bladder wound sutured, the abdomen and pelvis well mopped clean and drained, and a tube passed down to the wound at the base of the bladder. This patient was landed alive at Alexandria, but I heard he subsequently died. In another somewhat similar case, in which, however, the intestine was not so extensively lacerated, the intestinal openings were sutured, and the bladder wounds left open and drained. I saw this patient months afterwards at Harefield. He had, while there, developed a pelvic abscess, and after it had been opened and drained, a faecal fistula formed. We operated on all the abdominal wounds except those obviously hopeless. I am of opinion that cases of this kind in this war will practically all end fatally if left alone, and a large percentage of the patients die when operated on. If they can be got early, as we did get them, operation gives them a chance. The military view is rather that it is not worth wasting time for such chances, and the surgeon is better occupied with other patients more likely to recover.

The treatment of gunshot wounds of the head is another subject of controversy. Shortly before leaving on the *Gascon* I had read in the *British Medical Journal* of February 20, 1915, an address by Sir Victor Horsley, in which he pointed out that the danger in these cases was sepsis due to incomplete disinfection of the original wound, and "the fatal and detestable practice of leaving head cases alone." He also directed attention to the rise of intra-cranial pressure that occurs, and the extent to which fragments of bone and foreign bodies are driven in, all indicating the necessity for prompt operation. I was so much impressed with his arguments that every gunshot wound of the head on the *Gascon* was operated on. The hair and wound were painted with benzene and iodine, the wound protected with gauze, the scalp shaved, and again painted, and the scalp wound cut freely out. A big flap was then turned down and the bone thoroughly exposed. It frequently transpired that in what appeared a mere glancing scalp wound the bone was fractured—a small gutter or merely a crack. This was then trephined and invariably the inner table was found extensively splintered and the fragments driven through the *dura mater* and into the brain. These were picked out with forceps, the whole area well flushed with hot sterile saline solution, the original

wound drained, and the flap sutured. When the bone was obviously fractured and depressed, the same routine was adopted, the bone opening freely enlarged in all directions, and all fragments entering the dura and brain removed. When a bullet had penetrated, if it was easily accessible, it was removed also. When it was deep and not localizable, it was left; an operation could be performed later on at the base, if thought advisable. We found it difficult to get satisfactory X-ray photographs of the skull, owing to the vibration and the movement of the ship. One case may be mentioned that I remember, though I have no notes of it. An officer walked on board, making very light of what he said was only a scratch on his head. He had what appeared to be a superficial scalp wound in the parietal region. In the evening it was noticed that he had a very slight affection of his speech. He hesitated, and then altered his sentence, and when asked why he said he could not remember a particular word, and evaded its use. He had also a slight headache. On turning down a flap, a crack was seen in the frontal and parietal bones, and on trephining over Broca's convolution, the inner table was found to be much splintered and a fragment was driven through the dura into the brain. It was removed. When he disembarked he appeared perfectly well, and had quite lost his speech difficulty.

Mr. Percy Sargent, in a paper in the *British Medical Journal* of March 27, 1915, recommended delay in operation in the most common class of gunshot wounds of the head, where the wounds of entry and exit are near together, but it seems to me better to open up the wounds in all these cases as soon as possible, removing penetrating fragments and washing away the infection, provided, of course, that proper facilities for so doing are available.

We had a good many chest wounds, and those patients, who did not die almost immediately from internal hæmorrhage and shock, did remarkably well, without any surgical interference except the disinfection and dressing of the wounds of entry and exit.

We had only one bayonet wound, and that was in the back of a captured Turk.

During September, October and November I was attached to the staffs of the 3rd London General Hospital at Wandsworth and the Australian Hospital at Harefield, and had opportunities of seeing war wounds at a later stage, and also some recent cases from the western front. Some of the most interesting cases were those of nerve injuries. These require most careful investigation by a skilled neurologist, and we were fortunate at the 3rd London in having the assistance of Dr. Wilfred Harris. His views on nerve conductivity differ from the generally accepted hypotheses of Head, of protopathic and epicritic systems of fibres. Dr. Harris regards the differences in distinguishing light touch, pin-pricks and pressure as demonstrating different degrees of conductivity, and not different systems. In slight damage to a nerve diminution to pinprick and brush only will be found; with severance of a nerve, a hard



squeeze and firm pressure will be quite unfelt. I am not qualified to discuss this subject. I can only say that when I came to operate on these cases I invariably found that Dr. Harris' opinion as to the condition of the nerve was found to be quite correct. In operating on these nerve injuries, it is necessary to make free incisions, to expose the nerve thoroughly, to remove all bulbs, and to surround the sutured nerve with a sheath of fat or muscle.

We were also fortunate at the 3rd London in having very skilful radiographers, whose localization of bullets was most accurate. They always were present at operations, to give their advice. It is a moot point whether bullets should be removed or not, but it was remarkable how pain and other symptoms subsided when bullets have been removed from places, as in bone, where it was difficult to believe they could really be the cause of the symptoms.

I had the privilege when in London of hearing Colonel Sir Almroth Wright give an address, with demonstrations, on "Wound Infection," and I had previously had the pleasure of meeting Dr. J. W. Patterson, one of our distinguished Melbourne graduates, who has been working with Wright at Boulogne. He told me about his methods. I must say I was profoundly impressed by Wright's work, and I had some slight opportunity of carrying his methods into practice at the 3rd London in some septic cases from France. The results were very satisfactory, but, as Wright insists, the method requires close watching, with experience and judgement, to carry it out successfully. I also tried, and saw used by other members of the staff, the treatment by hypochlorite and eusol, but was not so satisfied with it. Patients complained that the solution was irritating and painful, and it was not so successful in cleansing the wound.

Another useful experience in England was visiting the hospital at Roehampton for soldiers whose limbs have been amputated. The staff is composed of well-known orthopaedic surgeons, like Mr. Robert Jones, Mr. Openshaw and others. They examine the stumps carefully, to see that they are fit for artificial limbs, especially that they have a sufficient range of movement, that the bones are properly covered, the skin not adherent, and there are no nerve bulbs. If not satisfactory in any of these points, directions are given for massage and movements, for operations, etc. The artificial limbs are tested on the patients, to see that they fit and are comfortable, that they are the right length and so on. Directions are given to the makers for their alteration when necessary. All this kind of work was quite new to me, and was very interesting.

In conclusion, I should like to mention two things. Firstly, the extreme courtesy, cordiality and kindness with which I was received by my colleagues on the *Gascon* and on the staff of the 3rd London General Hospital. Secondly, the extraordinary cheerfulness, patience, courage and unselfishness displayed by the wounded soldiers, whether Australian or British.

#### MENINGOCOCCAL CARRIERS.

Observations on the Incidence of Carriers in the Military and Civil Population, Otago, N.Z., during August and September, 1915.

By Sydney T. Champaloup, M.B., B.Sc. (Public Health), Edin., and John T. Bowie, M.B., D.P.H., D.T.H.  
From the Bacteriological Dept., Otago University.

Several interesting papers have already dealt with various aspects of the epidemic of cerebro-spinal fever in Australasia, and our only apology for the present communication lies in the fact that during a period of three or four weeks in August-September last year, we were able to investigate the percentage of carriers amongst soldiers on leave, and civilians in the district. The total number of cases we had access to during that period was not large, but the men were examined shortly after the discovery of cerebro-spinal meningitis at Trentham Military Camp, and when the epidemic was at its height. The bacteriological examination of each case included fermentation reactions, but no agglutination reactions were possible, owing to the lack of suitable serum at the time.

The soldiers examined were all from the 6th and 7th reinforcements, who were given leave shortly after cerebro-spinal meningitis had been diagnosed at the camp, but not until they had undergone several days' prophylactic treatment.

There had been several hundreds of cases of illness at the camp, mostly pharyngitis, measles, and "influenza." The climatic conditions had been for weeks such as predisposed to catarrhal conditions of the respiratory tract. In consequence, there was dampness, and overcrowding, especially in the sleeping quarters, which would have been avoided had not the weather been so continuously broken.

Many of the men who came to Otago during this time had distinct congestion or inflammation of the fauces, while others complained of influenzal symptoms.

The first two men examined both complained of sore throat, stiff neck, and headache. The fact that these two men were isolated pending the report on the bacteriological examination became known to other soldiers on leave in the town and district, so that during the next three weeks a considerable number of those who had throat or "influenzal" symptoms, came for examination.

After consultation with the authorities it was decided to establish a Military Isolation Hospital, and for this purpose a building and grounds were kindly lent by the Otago Hospital Board. Pending investigation, suspects were isolated, and when the subsequent examination yielded positive results, they were removed to the isolation hospital.

#### Procedure.

This part of the investigation covered the three weeks during which the men of the 6th or 7th reinforcements were on leave. No military cases after that date are included, as we wished to record the condition of the men, as soon as possible after

leaving camp, and during the height of the epidemic. All the men recorded complained either of sore throat, or of one or more of the symptoms usually associated with influenza.

The nasopharynx was swabbed with a West's swab, the distal end of the protecting glass tube being capped with paraffin, by being dipped in molten paraffin, after having been sterilized. The paraffin cap was pushed off by the swab when in the nasopharynx. The swab was then rubbed over a small portion of the surface of a plate of glucose serum agar, and the material was further spread by means of a bent glass rod. At first, we used two Petri dishes for each swab, but soon found that a sufficiently discrete growth could be obtained with one plate. After trying several media, we preferred a clear serum glucose agar, because of the very characteristic macroscopic appearance of the meningococcal colony on this medium. The serum (ox) was filtered through a Berkefeld candle, and heated to 56° C. for half an hour before being added to the warm glucose agar, in the proportion of 1 part of serum to 10 parts of agar, the reaction being adjusted to a slight alkalinity to litmus. Plates were poured so as to have rather more than the usual depth of medium, and incubated for 24 hours at 37° to ensure sterility. On this media the meningococcal colonies could be detected in 18 hours, and in 36 hours were 2 mm. or more in diameter. *Micrococcus catarrhalis* and the chromogenic cocci could generally be differentiated by their appearance or colour.

The plates were incubated at 37° C. for 36 hours, and Gram films prepared from several likely colonies from each plate. Those colonies, in which the cocci showed the characteristic variation in size, depth of staining reaction, and ready emulsification in films, were subcultured on glucose serum agar slopes, and incubated at 23° C. and 37° C. After 24 hours subcultures were made from the latter on Martin's medium,<sup>1</sup> to which 1% glucose, maltose or saccharose had been added. We found this medium much preferable to a fluid medium, and the reaction with the carbohydrates could generally be read quite distinctly in 48 hours. Our experience with maltose differed somewhat from that of Dr. Webster.<sup>2</sup> Using Martin's medium, in which the reaction was only faintly alkaline, the greater number of our cultures produced acid in the maltose tubes, but not so quickly or markedly as with glucose. A few cultures, which did not give the characteristic reaction with maltose in the first subculture, did so when subcultured on to a freshly prepared medium and incubated for 48 to 60 hours.

All colonies giving a characteristic appearance on the Petri plates, and in Gram smears, ready emulsification in films, absence of growth on serum agar at 23°, and acid with glucose and maltose, and no change with saccharose, were classed as meningococci, and the swab recorded positive. As already explained, no agglutination reactions were attempted.

As pointed out by Dr. L. B. Bull,<sup>3</sup> in an interesting letter, this procedure is too lengthy where a large

number of suspected carriers are under observation, and in our routine examination of cases other than those here recorded, we adopted very much the routine advocated by him, resorting to fermentation reactions when a doubtful colony was encountered.

In all, 34 men were examined by the above method, and of these 27, or 79.4% were positive, and seven were negative. This appears at first sight an unduly large proportion of positives, but it must be remembered that the men had just come from the camp, where, partly owing to the bad weather, there were several hundred cases of illness. Moreover, the figures do not represent the percentage of carriers amongst all the troops on leave, but the percentage amongst those on leave who came to hospital in Dunedin with a definite pharyngitis, or with influenza symptoms.

#### Duration of Carrier State in above cases.

Each of the positive cases as detected was isolated at the special Military Isolation Hospital at Wakari, near Dunedin. The men were placed under a military guard, but owing to lack of accommodation they were not isolated from one another.

At first all the men were required to gargle their throats, under supervision, four times a day, with 1:1000 potassium permanganate, and to irrigate the nasopharynx with Burroughs, Wellecome and Co.'s soloids in solution, three times daily. Formamint tablets were prescribed as well. Those who were unable to gargle efficiently had their throats carefully swabbed with 1:1000 potassium permanganate solution. Subsequently *liq. sodae chlorinatae* was used as a throat spray.

Six of the men were given insufflations of kaolin, recently recommended by Hektoen. It was disagreeable to all, and we continued this treatment in five of the cases with no better result than with the other remedies. We became convinced that the men were being reinfected from one another and from the newer cases, but it was not until the 23rd September that we were able to isolate the patients to some extent. The weather at this time was exceptionally fine, and the men were advised to remain outdoors as much as possible, and to avoid all unnecessarily close contact. Immediately a change in the cultures was observed; the colonies were fewer, and in nine days all the patients (12) were discharged.

The men under observation were swabbed in batches of six or eight every second or third day, so that every man was swabbed at least once a week. When once a negative result was recorded in any case, a further swab was taken at the next visit, and no patient was discharged until the examination proved negative on two consecutive occasions separated by a 48 hours' interval. The interesting fact remains that in several of the cases numerous meningococcal colonies developed on the plates for several weeks, in spite of treatment as outlined above, and it was only when the number of men was sufficiently reduced, and we were able to adopt individual isolation to some extent, that they quickly cleared up.

The periods during which meningococci persisted in the fauces were as follows:—

Our Table.	Carriers.	Bruns & Hohn's Table.	Carriers.
From 0- 1 week ..	1 case	Up to 8 days ..	28
From 1- 2 weeks..	2 cases	Up to 2 weeks..	18
From 2- 3 weeks..	3 cases	Up to 3 weeks..	13
From 3- 4 weeks..	1 case	Up to 4 weeks..	10
From 4- 5 weeks..	2 cases	Up to 5 weeks..	4
From 5- 6 weeks..	2 cases	Up to 6 weeks..	3
From 6- 7 weeks..	4 cases	Up to 7 weeks..	3
From 7- 8 weeks..	0 cases	Up to 8 weeks..	1
From 8- 9 weeks..	9 cases	Up to 11 weeks..	1
From 9-10 weeks..	3 cases		
	27		81

The average period of the carrier stage was 42.8 days. The longest period was 66 days, and the shortest 5 days. These periods extending from the date the case came under observation, until a second consecutive negative result was obtained.

It will be observed that 12 of the cases remained positive for over eight weeks, but that these quickly cleared up when individual isolation was resorted to. In Bruns and Hohn's Table<sup>4</sup> the majority of the carriers were disposed of within four weeks, the largest percentage not exceeding eight days. No systematic examination of all their cases was undertaken, however, and negative results were not recorded in all.

#### Incidence of the Meningococcal Carrier amongst the Civil Population during the same period.

At the instance of the late Colonel F. C. Batchelor, Colonel Valintine, Director of Military Hospitals, requested us to ascertain the presence of meningococcal carriers in the civil population, at the same time as we were investigating the condition of the soldiers on leave. As in the latter we confined our attention to those suffering from catarrhal conditions of the nasopharynx, either with or without accompanying headache, stiffness of muscles of neck or other "influenzal" symptoms. The procedure was similar to that employed in the military series, except that whereas the soldiers came themselves to hospital for advice from different parts of the district, many of the civil cases were attended by medical practitioners. Through the kindness of the practitioners we were able to get into touch with many of the patients in this series.

The procedure followed in connexion with the country cases may be of interest to public health officials elsewhere. About this time the public was more or less in a state of alarm, and we were consulted by practitioners as to the best means of forwarding naso-pharyngeal swabs for investigation. We trained five senior medical students in the technique of using West's swab and inoculating the plates of serum agar. After some practice in hospital, the students visited cases in turn with the practitioner in charge, and either swabbed the nasopharynx, or gave the practitioner particulars of the method to be followed. The student inoculated and spread the plate on the spot, and then placed it in a

bag with a hot water bottle, so that the temperature of the interior of the bag was about 35° C. The cultures were carried to the laboratory as soon as possible, and placed in the incubator at 37° C., ready for us to investigate on the following day.

In this way, cases many miles distant from Dunedin were investigated, and we were able to provide acceptable help to the practitioners concerned.

#### Result of Investigation.

In all 43 civilian cases were fully investigated, of which five (or 11.6%) were found to harbour the meningococcus in the naso-pharynx. One individual developed meningococcal meningitis and died.

Thirteen persons of the 43 investigated had been in recent close contact with troopers on leave, and the bacteriological finding was positive in three cases. Several of these contacts had been using antiseptic gargles and douches, however, before being examined. The remaining 30 had not to their knowledge been in contact with soldiers, and of these only two yielded positive results.

Four of the civilian patients subsequently died. One, developed meningococcal meningitis; a second, from whose naso-pharynx a profuse growth of meningococci was obtained, developed a fatal streptococcal septicæmia; a third, in whose naso-pharynx no meningococci were found, developed acute hydrocephalus with no *post-mortem* evidence of bacterial infection; and a fourth, also negative, developed tubercular meningitis.

These fatal cases bear out the importance of a bacteriological examination of all suspicious cases during an epidemic; otherwise they might have been returned as fatal cases of meningococcal infection.

#### Meningococcal Infection in New Zealand as a whole.

If the result of our examination of soldiers may be taken to represent the conditions prevailing during July, August and September of last year, we may assume that a relatively large number of soldier carriers were on leave about that time, and that they came into more or less intimate contact with a much larger body of civilians. In view of the Australian experience, it would be expected that a much larger incidence of meningococcal infections in the civil population would have resulted in consequence. Yet in our own province of Otago there has only been to our knowledge one fatal case, while several other cases of meningitis investigated during the period in question, and since that period, have been proved to be due to other causes. Nor have we come across any cases of meningococcal infection other than meningitis, save in the five civilian carriers which we detected. These remarks apply equally well to other districts in New Zealand, where, fortunately, there have been remarkably few cases amongst the civil population.

#### References.

- <sup>1</sup> Martin, *Jnl. Path. and Bacteriology*, 1910, XV., 76.
- <sup>2</sup> Webster, *Med. Jnl. Australia*, November 6, 1915, pp. 441.
- <sup>3</sup> L. B. Bull, *Med. Jnl. Australia*, December 18, 1915, pp. 594.
- <sup>4</sup> Bruns and Hohn, quoted Ledingham and Arkwright, "Carriers in Infectious Diseases," pp. 252.



## INSANITY DUE TO MITRAL STENOSIS.

By W. A. T. Lind, M.B., B.S.,

Pathologist, Victorian Lunacy Department, Melbourne.

In the causation of insanity, there are two factors, inheritance of a vulnerable nerve tissue and stress in some form or other, which either directly or indirectly interferes with the health of the neurone. Mitral stenosis insanity has not been very definitely described by either Clouston, Stoddard or Maurice Craig. Mitral stenosis has been mentioned collectively with all kinds of heart diseases and conditions producing dyspnoea as a cause of insanity, in which hallucinations and some degree of confusion, together with restlessness and excitement, are the predominating factors. The following cases should therefore interest alienists, because the histories are much alike, and the mental break-down is so closely associated with the heart disease, which was demonstrated *post mortem* to be an extreme condition of mitral stenosis.

Although varying degrees of mitral stenosis are met with *post mortem* in connexion with insanity, there is nearly always some other physical disease or cardiac lesion present. This is seen to a certain extent in Case III., in which an old hydrosalpinx was found. In these cases recorded here, however, there is practically a single physical condition, namely, mitral stenosis, so that the mental condition associated with the disease can be regarded as identical with the group of symptoms here described.

## Case I.

The patient was received in the Royal Park Receiving House on January 1, 1915. Her mental condition on admission was as follows:—

She had delusions that she was surrounded by people and animals who were tormenting her. She was rowdy and noisy, and threw herself out of bed. She was incoherent and confused. She prayed aloud. The patient was ill-nourished and had a loud mitral murmur, with oedema of the ankles. The specific gravity of the urine was 1025. It contained albumin.

The patient's maternal aunt has been in Yarra Bend Hospital for the Insane for eight years. The cause of insanity was heredity and heart disease.

The attack was a first attack. The patient was 42 years of age on reception. The attack had lasted two weeks before admission.

On January 29, 1915, she was fretful, and wept at times. She heard voices, and spoke to them. Physically, she was much better. She died on February 2, 1915.

## Post Mortem Examination.

A middle-aged female. There were several minor bruises on the body, and some oedema of the legs. Scars of old perineorrhaphy and gall-bladder operations were visible.

Circulatory System.—The right ventricle was very large, and the left ventricle small. The wall of the right ventricle was  $\frac{1}{2}$  inch thick. There was marked mitral stenosis. The tip of the finger could

not be passed through the aperture. There was atheroma of the abdominal aorta and several small patches of atheroma were seen on the aortic arch and pulmonary artery. There was an excess of pericardial fluid. The spleen was large and tense.

Thorax.—There was brown induration of both lungs. Pneumonia and pleurisy were detected in the lower lobe of the right lung. The tracheal mucosa was congested.

Alimentary System.—The cut surface of the liver presented a nutmeg appearance. There was an old scar over the site of the gall bladder, which was adherent to the gall bladder. Ascitic fluid was present in the peritoneum and old chronic peritoneal adhesions were found around the gall bladder.

Urinary System.—The kidneys were free from disease. There was a small infarct in the left kidney. The capsules stripped off the organ easily, leaving a smooth surface.

The generative, glandular and osseous systems appeared to be normal.

Nervous System.—The *dura mater* was normal. The *pia-arachnoid* showed signs of slight oedema. There was no adhesion to the cortex. There was no granularity of the ependyma, and no dilatation of the ventricles. The basal vessels were normal. On section, no gross lesions were detected, but the brain substance was somewhat congested.

## Case II.

This patient was received at Kew on January 21, 1916. Her mental condition was as follows:—

She was rambling and incoherent. She had delusions that she was being poisoned and shot. She confused identities, and was violent and used filthy language. She gesticulated constantly.

The patient had a livid complexion. There was marked mitral valvular disease. Her mother's brother had been insane, and had died in the Hospital for Insane at Yarra Bend. This was the third attack. Her age on admission was 47 years. She was 43 when first attacked. The present attack had lasted for three weeks.

Both legs were oedematous, and the pulse was small and weak. She was very noisy during the afternoon of January 22, and on the 29th she was cyanosed, and refused her food. She maintained that the food was poisoned. Her condition was critical. She died on February 1, 1916.

## Post Mortem Examination.

A middle-aged female. There was general anasarca. The face had a yellowish tinge, due to exposure to the sun.

Circulatory System.—There was atheroma of the abdominal aorta and pulmonary artery. The wall of the right ventricle was thickened, and measured  $\frac{1}{3}$  inch. The left ventricle was normal. The coronary vessels were normal. There was stenosis of the orifice of the mitral valve. The orifice admitted the tip of a pen-holder.

Respiratory System.—The lungs were emphysematous and brown induration was present. There



were strong general adhesions between the chest wall and the right lung. The tracheal mucosa was congested.

**Alimentary System.**—The capsule of the liver was thickened, and there was an irregular lumpiness of the surface of the organ. On section, the hepatic substance was seen to be infiltrated with pellets of fat. It had a nutmeg appearance. The intestines were apparently free from disease.

**Urinary System.**—The capsules of the kidneys stripped off the organs easily. They were thickened. The surface of the kidneys was smooth. The pyramids were paler than usual. The organs were generally enlarged and dark in colour.

The generative organs were normal. The calvarium was thickened and inclined to eburnation.

The *dura mater* was apparently natural, as was the *pia-arachnoid*. No granules were detected in the ependyma. The ventricles of the brain were not dilated, and the vessels at the base were normal. The brain substance was congested. No gross lesions were detected on section.

#### Case III.

The patient was received at Royal Park on July 14, 1915. The mental condition of the patient on admission was as follows:—

She was rambling and mischievous. She forgot the subject of conversation, and wandered on to other subjects. She kept on blowing out the light at night-time. She was restless. She laughed and grinned when spoken to. She was noisy at night.

The patient was thin and apparently in indifferent health. There was a distinct mitral murmur.

Two of the patient's sisters were insane. Her father and uncle had died insane.

The attack was a first attack; the patient was 44 years of age on reception. The attack had already lasted six weeks.

On August 6, 1915, she was resistive, and refused food and medicine. Her condition was regarded as serious, and she died two days later.

#### Post Mortem Examination.

An emaciated middle-aged female. No external marks were detected.

**Circulatory System.**—There was atheroma of the abdominal aorta. The aortic arch was not affected. The mitral valve was affected, the orifice being stenosed, so that the tip of the finger could not be passed through it. The wall of the right ventricle was thickened. The coronary arteries were normal. The spleen was large and tough.

**Respiratory System.**—Both lungs were affected with brown induration. There were small infarcts in the lungs and fresh fibrin on the pleural surfaces. There were many pleural adhesions.

**Alimentary System.**—The liver was tough, and its capsule thickened. The omentum was adherent to an old inflammatory exudate, involving the left tube and ovary.

**Urinary System.**—The kidneys were large, tough and congested. The surface was granular after the capsule had been stripped off.

**Generative System.**—There was a hydrosalpinx on the left side, and the right tube and ovary were matted together.

The calvarium was thickened and eburnated.

The *dura mater* was thickened and adherent to the calvarium.

The *pia-arachnoid* was normal. The ventricles were somewhat dilated, and there was some wasting of the convolutions. There was marked congestion of the brain substance. No granules of the ependyma were detected. The vessels at the base of the brain were thickened. No gross lesions were detected on section of the brain.

## Reports of Cases.

### A CASE OF PAGET'S DISEASE (OSTEITIS DEFORMANS).<sup>1</sup>

By Harry W. Connolly, M.B., (Sydn.),  
Inglewood, Queensland.

In the current (October, 1915) number of the *British Journal of Surgery*, there is an interesting and most instructive article, entitled "A Case of Paget's Disease (Osteitis Deformans), with a Note on its Pathology," by G. Jefferson, of Victoria, B.C. The following notes of a case I had some three years ago may prove interesting, and the photographs instructive when placed together with the X-ray pictures (1) taken by Jefferson. In my case, the patient was a man of 59 years, and he came in seeking a certificate to enable him to obtain the Invalid Pension granted by the Commonwealth.

#### Case History.

The man was a miner and a blacksmith by trade, and of temperate habits as regards alcohol and tobacco. He was married, and had two healthy children. There was no history of syphilis, tuberculosis or epilepsy in the family. His personal history was good. He had never had a venereal disease of any kind, but had had "muscular rheumatism" for several years. The present condition came on most insidiously. It started about ten years before I saw him. Up to that time the patient was a well-made and strong man, 5 feet 7½ inches in height, and 10 stones or over in weight, and he wore hats size 6¾—a very important point to notice in this condition. He first noticed the condition, owing to what he termed a "second growth of bones in the legs."

#### Physical Examination.

I was immediately struck by the extraordinary appearance of the man. His posture was that of a doubled-up and bandy old man of 90, perhaps better described as Simian, and his head was pushed forward.

**Head.**—The head was pushed forward and of remarkable size and shape. It was almost pyramidal in shape, with the base upwards. The skull bones were found to be greatly thickened and bossed. When asked the size of his hat, he said that ten years ago, before the condition started, he took hats size 6¾, but at the time of the examination he took 7½. This represents a growth in the circumference of the skull of about three inches.

The face was characteristic; it was triangular in shape (vide Fig. III.) with the apex at the prominent chin and the base above.

**Neck and Trunk.**—The neck and trunk were also characteristic. There was a marked dorso-cervical kyphosis, which resulted in the pushing forward and elevation of the

<sup>1</sup> Read at a meeting of the Queensland Branch of the British Medical Association by Dr. Hemsley, for the author, on March 3, 1916.

head. This is well shown in Figs. II. and III. In Fig. III. the stretching of the sterno mastoid muscles, and in Fig. II. the wrinkling of the skin at the back of the neck, due to the elevation, are well seen.

The thorax was fixed and considerably widened at the base, but not much altered above. Behind the dorso-cervical kyphosis, mentioned above, was very evident, and is well seen in Fig. II.

The abdomen was diamond shaped (*vide* Figs. I. and III.), and was crossed by a deep sulcus at the level of the umbilicus. The diamond shape was due to the widening and lowering of the thorax, and also to the widening and spreading of the two ilia of the *osssa innominata*, while the sulcus was due to the hunch-backed condition of patient.

Lower Extremity.—There was a real as well as relative

greatly thickened. The shaft of the bone was arched outwards and forwards, and the lower end was twisted so that the feet looked forward in the normal direction. The head of the fibula and the lower end were also considerably thickened.

Foot.—Let me quote Jefferson with Fig. IV. at hand: "The normal outline of astragalus is quite altered, as a deposit of new bone has obscured its neck. . . . As there is a similar deposit posteriorly, the movements of the ankle joint are impaired. The os calcis is seen to be deformed as well, having a prominent bulge in its inferior surface. The arches of the foot are not destroyed, but the foot gives the impression of being a flat foot, owing to the bony encroachments into the sole." Jefferson could not have described the feet in my case better than when he gave that description



Fig. I.

increase in the diameter of the hips, which was due to the innominate bone being affected. The result of this was that the acetabulum on each side looked downwards, outwards, and, if anything, slightly backwards (instead of downwards, outwards and distinctly forwards), and this in turn resulted in a rotation of the femur outwards, so that the internal tuberosity at the lower end of the femur looked forwards and inwards, and the great trochanter at the upper end outward and backwards. This also made the man's patellæ look outwards instead of forwards. The femora were greatly thickened, but only slightly curved, with the convexity outwards. The tibiae showed characteristic changes (*vide* Fig. IV.). The upper end of the tibia and the lower end of the femur are seen in the illustration to be



Fig. II.

of the feet of the patient who came under his notice. Fig. IV. illustrates this extremely well.

Upper Extremity.—All the bones showed thickening, and in Fig. III. the greatly thickened clavicles are seen to be prominent, while in Fig. II. the scapulæ are seen to be thickened and enlarged. In the hands the knuckles were thickened and bony outgrowths and nobs like Heberden's nodes were noted.

I measured the man's height in my surgery, and found that it was 5 feet 0¼ inch on October 30th, 1912—a loss of 7½ inches.

The enlargement and thickening of the bones of the skull necessitated an increase gradually from 6¼ to 7½ in the size of his hat—an increase in circumference of nearly 3in.

**General Condition.**

The general health was very good. All his reflexes were normal and special senses in good order. His mind was clear. He weighed 9 stones 12 lbs. He suffered a good deal from what he termed muscular rheumatism, but there were pains in the muscles and tendons due to the condition. His arteries were atheromatous and somewhat calcified, but not greatly. They can be seen following their tortuous courses in one or two of the illustrations.

**Diagnosis.**

The diagnosis is easy. The shortening of the stature and the increase in size of the head, the pyramidal skull, the triangular face, with a prognathous lower jaw, the prominence of the clavicles, the projection forward of the head, the diamond-shaped abdomen, crossed by a deep, transverse sulcus, the increase in the width of the hips, the outward and forward bowing of the legs, and the condition of the feet make a clinical syndrome too clear to admit of mistake.

In acromegaly the face is ovoid, with the broad end downwards. It occurs usually in women.

**Pathological Note.**

There seems to be no doubt that the changes in the bones are preceded by a rarefying osteitis, followed by a compensating thickening, which thickening is progressive. Osteomalacia is a condition in which we can see microscopically these two states side by side — a rarefying osteitis pushed to the extreme, with a periosteum endeavouring to lay down new bone to compensate, but in vain. Would it not then seem as though osteomalacia and osteitis deformans (Paget's disease) were the acute and chronic forms of the same pathological condition? In both conditions there seems to be a peculiar tendency to malignancy, and in both conditions parathyroid tumours and disease have been found. Pituitary body disease has also been noted in both. Of course, the influence of these glands (parathyroid and pituitary, and also thyroid) is now well established, and cases have occurred in which pituitary substance has cured osteomalacia. It is therefore quite possible that in the internal secretions will be found the clue to the true pathology of Paget's disease.

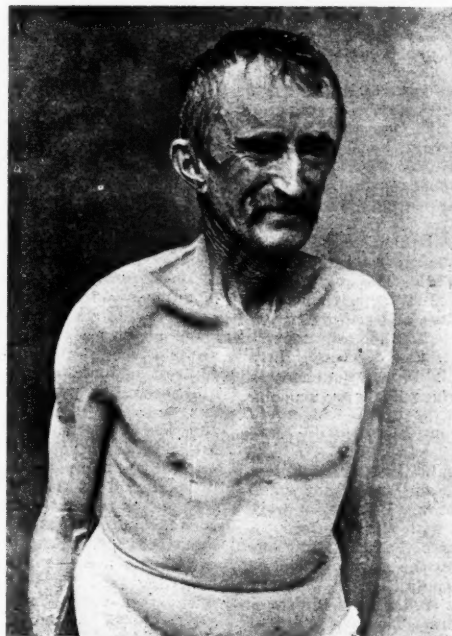


Fig. III.



Fig. IV.

**A CASE OF MENINGOCOCCAL CONJUNCTIVITIS.**

By T. C. Ker, M.B., B.S.,  
*Hon. Ophthalmologist,  
Bendigo Hospital;*

and  
R. O. Douglas, M.S.,  
*Surgeon, Bendigo Hospital.*

During the night of September 10, 1915, a nurse on night duty in the meningococcal isolation block at the Hospital "felt a strained feeling in her right eye." Next morning the eye felt sore, and there was a grating sensation under the lid. That night there was some slight discharge from the eye. The condition of the eye was reported at 3 a.m. on the following morning. At this time the eye was very much inflamed, and the conjunctiva red and engorged. Both lids were very red and inflamed, and there was a profuse, purulent discharge. The nurse was sent off duty. Her eye was irrigated with boracic lotion. Atropin drops, a pad and bandage were prescribed.

At 6 a.m. smears and cultures on glucose agar were made from the lower fornix of the conjunctiva. The smears showed great numbers of pus cells, with very large numbers of fairly large Gram-negative diplococci, both intra- and extra-cellular. The diplococci were definitely larger and fatter than it had been the rule to see in the cerebro-spinal fluid. The cultures gave a rapid, profuse growth of apparently typical meningococcal colonies in all three tubes inoculated. In two cases the growth was in pure culture, so far as could be told by examination of the colonies and by staining them.

At this time the eye was much more inflamed. The upper lid was a little oedematous, and the vessels of the bulbar conjunctiva were very dilated. The whole of the palpebral conjunctiva was dark red and velvety-looking. There was a very profuse, purulent discharge. The eye was extremely painful, and the patient unable to sleep. A fairly well marked nasopharyngitis had developed in the previous 24 hours. (No swabs were taken from the nose or throat, on account of lack of time.) The temperature and pulse were normal. The tarsal conjunctiva was painted with silver nitrate lotion, 10 grains to the ounce, and cocaine with 5% cocain. The eye was irrigated every two hours day and



night with boric lotion. A nasopharyngeal douche of normal saline, followed by inhalation of eucalyptus, was ordered thrice daily. Buller's shield was ordered for the left eye.

The question of giving a vaccine as a prophylactic against meningococcal infection was raised, but it was decided that the danger of the infection becoming generalised during the possible occurrence of a negative phase was too great, and that a vaccine was more likely to be a danger than a prophylactic. Had antimeningococcal serum been available, it would certainly have been given.

On September 12, at 6 p.m., the discharge was still very profuse, but the great pain had disappeared. There was still no evidence of chemosis.

On September 13, 1915, the eye was lightly treated with silver nitrate and cocaine. The discharge was much less. The general condition was about the same. The grating under the lids was less. At 6 p.m. the left eye was irritable, and a slight discharge was evident. (Smears and cultures gave the same organism as were present in the other eye.) Slight grating under the lids was noted. The eye was lightly done with silver nitrate and cocaine. It was douched, as was the other eye. At 12 p.m. a very profuse discharge was observed from the left eye. Much less discharge was noted from the right eye. The patient complained of a very sore throat.

On September 15, 1915, the nurse said that she had lost her sense of smell. On examination, she could not smell perfumes, but could detect acrid odours. Both eyes were much better, and were dressed lightly with silver lotion.

The left eye had not reached the stage that the right one did. When the trouble was at its height the right eye looked worse than an acute gonorrhoeal ophthalmia.

On September 16 it was noted that a tremendous improvement had occurred in the last 24 hours. The use of silver nitrate was stopped. The sense of smell was present.

By September 17 the left eye was quite well, and the right eye also almost clear, except for a little infection of the lids. Atropin was stopped.

The patient got up on September 18, 1915, and two days later was back on duty.

So far as we are able to determine, this is a genuine case of meningococcal infection. The identification of the germ is notoriously difficult, but the attendant circumstances were strongly in favour of an infection by the *meningococcus* rather than by the *micrococcus catarrhalis*.

Though several other cases of generalized infection later developed conjunctivitis, in none was the infection of such a fulminant type as this, in which no general infection occurred.

The infection by the meningococcus, both of joints and of the conjunctiva, seems to be of almost explosive rapidity, but, fortunately, the recovery in every case that has been seen in Bendigo is just as rapid as the invasion.

## Reviews.

### PROTOZOA AND CANCER.

There is but little doubt that the development of the science of protozoology will open out new fields for research in medicine, and that many of the problems, which now baffle the investigator, may be found to be bound up with protozoa or protists. At the present time there are few known diseases that can be traced to protozoa; and even in cases like malaria, the acquisition of the knowledge required for the full elucidation of its pathology was slow and uncertain. Various attempts have been made to extend the list of protozoal diseases, and, as is natural, those processes, in which a bacterial causation has not been discovered, have been the first to be associated with the higher organisms. Sjöbring, Plimmer and many others have claimed to have discovered a parasite of cancer, but the proof on which these claims has been made has been regarded as insufficient. In Sjöbring's case it has been shown that the alleged protozoa were cell detritus, caught up in epithelial cells. Cork cells have also been mistaken for protozoa and described minutely; even the various stages of development have been imagined. Similarly, Plimmer's bodies have been investigated and found wanting.

The task that J. Jackson Clarke has set himself is, by reason of the experience of others, one which must meet with opposition at the start. He has asked the scientific world to believe with him that cancer is caused by a mycetozoon. Whether he will succeed or not must depend on the force of his arguments, and on the nature of the proof offered. We are, consequently, fortunate in having a full description of his investigations in his book on "Rhizopod Protozoa." His contention that too little attention is paid to protozoa by those engaged in the study of disease should receive general acceptance. To remedy this he enters into a detailed and skilled description of some common mycetozoa, including *Didymium difforme*. It is unnecessary to follow the author through this part of his work, firstly because much of the description has already been accepted by protozoologists, and secondly because the small points of difference from previously described appearances can be neither confirmed nor refuted from the drawings of the specimens. He then makes a blunder, which may lead to an increase in the opposition which he has to encounter. Instead of breaking off with the description of accepted and recognized protozoa, and starting afresh with his alleged cancer protozoa, he attempts a short cut by intermingling the descriptions. He ignores the fact that microscopical appearances of normal cells are very varied, and that the variability increases greatly in abnormal cells. The first introduction of the cancer parasite is a mere assumption, without argument, without evidence, without proof. The second stage is equally disappointing, in that it consists of an attack on Virchow's cellular pathology, on the ground of it being mere assumption, and of the counter assumption that the odd-shaped, often ill-defined cell inclusions met with in cancer and other diseases are protozoa. Incidentally, it may be mentioned that by his explanation of a filterable virus, he runs the risk of being regarded as frivolous. He sees no reason why any plastic body should not pass through porcelain, provided that sufficient time is given for it to be elongated and thinned out. The last chapters are the outcome of running before walking is learned. He pleads with McDonagh for a hypothesis that assumes an aetiological relationship between cancer and syphilis. Much—indeed, all—of the author's contentions may be true. But it must be recognized that he has not proved any of them.

### The Royal Society.

The following is a list of those who have been recommended by the President and Council of the Royal Society for election into the Council for the year 1916: President, Sir Joseph J. Thomson; Treasurer, Sir Alfred Bray Kempe; Secretaries, Professor Arthur Schuster and Mr. William Bate Hardy; Foreign Secretary, Dunkinfield Henry Scott; other members of the Council, Professor John George Adami, Sir Thomas Clifford Allbutt, Frederick Frost Blackman, Dugald Clerk, Sir William Crookes, Professor Arthur Dendy, John Stanley Gardiner, Henry Head, George William Lamplugh, Professor Augustus Edward Hough Love, Major Percy Alexander MacMahon, Professor Raphael Meldola, Professor Arthur Smithells, Professor Ernest Henry Starling, Richard Threlfall, and Sir Philip Watts.

The awards mentioned below by the President and Council of the Society have been approved by the King: A Royal medal to Professor Sir Joseph Larmer, F.R.S., for his numerous and important contributions to mathematical and physical science; and a Royal medal to Dr. W. H. Rivers, F.R.S., for his important contributions to ethnography and ethnology. The following awards have also been made by the President and Council: The Copley medal to Professor Ivan Petrovitch Pavlov, for his investigations in the physiology of digestion and of the higher centres of the nervous system; the Davy medal to Professor Paul Sabatier, for his researches on contact action and the application of finely divided metals as catalytic agents; and the Hughes medal to Professor Paul Langevin, for his important contributions to and pre-eminent position in electrical science.

<sup>1</sup> Protozoa and Disease, Part IV, Rhizopod Protozoa, The Cause of Cancer and Other Diseases, by J. Jackson Clarke, M.B. (Lond.), F.R.C.S., 1915. London: Baillière, Tindall & Cox; Folscap quarto, pp. 183; illustrated. Price, 7s. 6d.

## The Medical Journal of Australia.

SATURDAY, APRIL 1, 1916.

### Isolation.

The practice of isolating persons suffering from certain infectious diseases is one of the most efficient means at the disposal of the physician for preventing the dissemination of these diseases through the community. The custom is of great antiquity, and is certainly as early as the formulation of the Mosaic law. Strict isolation should be employed whenever the transmission of infective material cannot be controlled by other means. A case of enteric fever can be admitted to the general medical wards of a hospital, since adequate disinfection of the bed linen and excreta will prevent the infection of patients in neighbouring beds. A case of scarlatina will, however, spread infection in a general ward, since the infective agent cannot be prevented from reaching the patients in other beds. Isolation also affords means for limiting the infective area. Patients suffering from malaria or yellow fever who are isolated in rooms from which mosquitos are excluded by proper construction cannot serve as reservoirs for the infection of these insects. Isolation is especially needed when the nature of the infective agent and the mode of infection are not fully known.

Isolation of patients suffering from infective diseases is not the only form of isolation that is employed. Persons who may have been infected from any source may be isolated before they develop the disease. Persons may be isolated for a time, to determine whether they are infected or not. The period of isolation in these cases should be estimated by a consideration of the period of incubation in the disease in question. Such isolated persons and their belongings should be disinfected, so that they are not infected during the period of isolation. This isolation of contacts, as it is called, is most important in the prevention of certain classes of infective diseases. It is required in those diseases in which infection can be spread before the disease manifests itself by the development of symptoms. Where a

disease is not infective until after symptoms set in, isolation can be replaced by a system of inspection, which can be continued by requiring the suspected patient to report at proper intervals of time.

Isolation is also needed in the case of persons who harbour infective microbes, but do not manifest any signs or symptoms of disease. The isolation of carriers is destined to form an important part of the practice of preventive medicine.

The outbreaks of epidemic cerebro-spinal fever and of infantile paralysis in Australasia have received much attention in the lay press. Although these diseases have affected only a small percentage of the population, the high fatality in the one and the lifelong paralysis in the other have attracted public attention. The opportunity has been seized by the Public Health authorities in some of the States to introduce new legislation, based on a knowledge of the defects of Health Acts formerly in operation. In Victoria, where an epidemic of cerebro-spinal fever was raging during the winter months of last year, a set of regulations have been gazetted to assist in controlling any outbreak during the approaching winter. These regulations set forth the duties of municipal councils in connexion with this disease. Every Council, on receipt of the notification of a case of cerebro-spinal fever, must isolate the premises where the patient resided, together with the occupants of the premises. The premises and the occupants must be maintained in isolation as long as the medical officer of health deems necessary. The Council has to provide medicines and such medical and other aid as is required by persons suffering from or threatened with cerebro-spinal fever. Every person who has been in the same room at the same time as the patient within seven days of his isolation must report to the officer of health and submit to medical and bacteriological examination when and where required. Councils must isolate any contact who develops symptoms of cerebro-spinal fever, sore throat, nasal catarrh or influenza. Such contacts must be isolated until the health officer directs their release from isolation. Every contact must adopt such treatment as the medical officer of health directs. Councils are required to isolate all carriers, and all carriers must submit to

such examinations as are required, and must carry out any treatment to which they are subjected. Carriers are to remain isolated until the medical officer of health is satisfied that they cannot convey infection. Councils must cause any premises occupied by a patient, or in which he has been employed, to be disinfected to the satisfaction of a health officer. Councils are further required to furnish a report to the Board of Health, which report must include particulars of the source of infection, of the movements of the patient for two weeks before isolation, of his place of employment, and of the measures taken to prevent the spread of the disease. A penalty is provided for breaches of these regulations, which increases for each day during which they are not observed.

The rigid use of isolation under these regulations should assist materially in controlling the disease. Its operation will be watched with interest by all students of preventive medicine.

#### MEDICAL REPORTS TO THE MILITARY AUTHORITIES.

The medical profession has signalized its desire in many ways to assist the military authorities in the treatment of sick and wounded soldiers. Cordial co-operation is needed for the efficient discharge of our duty to these men who have suffered for their country. A request of the Principal Medical Officer for the second military district places a difficulty in the path of many conscientious practitioners. He asks that any practitioner called to attend any soldier who has returned from active service, or who is in camp, shall render a report to the Staff Officer for Invalids, or the Camp Commandant of a local camp. No difficulty will be experienced by medical practitioners, who are members of the Army Medical Corps or of the Army Medical Corps Reserve, who attend the particular soldiers concerned in their capacity as officers of the A.A.M.C. Neither will any difficulty be felt by medical practitioners in attendance on returned soldiers within three months of their return, under the scheme devised by the Director-General of Medical Services for the Commonwealth of Australia.<sup>1</sup> Their reports will be forwarded as required by the regulations to the Staff Officer for Invalids. Much difficulty will, however, occur in the case of medical practitioners who have

been consulted in their private capacity by returned soldiers, or by those in camp undergoing military training. The Council of the New South Wales Branch of the British Medical Association considered this matter some months ago, when a similar request was contemplated by the military authorities. They were of opinion that compliance with such a request would involve members of the medical profession in a breach of the custom of the profession, and they decided that no general rule should be made as far as the Association was concerned. No medical practitioner has any right to communicate to another person any information he has received from a patient in his professional capacity without the consent of the patient. The conditions of military service cannot involve any obligation on the part of a medical practitioner to depart from this established rule. Every medical practitioner should therefore carefully consider whether he is justified in each individual case in furnishing the desired report.

#### RETENTION OF SALVARSAN BY THE BLOOD.

A review of the progress of medical knowledge reveals the transformation of the art of therapeutics from an empirical practice towards that of an exact science. This development is slow and imperfect. Two centuries elapsed from the introduction of cinchona bark into Europe for the treatment of intermittent fevers to the discovery of quinine, and another half century passed before the pharmacology of that potent alkaloid was given a sure foundation by the demonstration of its lethal action on the malarial parasite. To-day the administration of quinine in malaria to obtain its optimal activity requires acquaintance with the age and generations of the parasites present. The greater attention given during the last half century to the basis of medical practice is due to the slowly growing belief that an acquaintance with the mode of action of a drug will lead to its more effective use. This belief has imparted momentum to the study of the properties of medicines. Less than ten years ago salvarsan and neo-salvarsan were brought to the notice of the physician for the treatment of syphilis and other diseases due to parasites belonging to the natural order, *Protozoa*. Physicians and pharmacologists have collected much detailed information on the laws governing the medicinal characters of these substances. In the case of salvarsan, a decade has witnessed what centuries awaited for bitter bark. Indeed, the discovery of these two bodies was due to an attempt to proceed from what was known of the pharmacological action of chemical radicles and ions to the manufacture of drugs with definite qualities by one who was learned in chemotherapy.

<sup>1</sup> This Journal, vol. II., p. 56, 1915.



An investigation<sup>1</sup> into the changes which occur in the blood after the intravenous injection of salvarsan and neo-salvarsan has been made by Dr. W. J. Young at the Australian Institute of Tropical Medicine, Townsville, Queensland. It has been already ascertained that arsenic appears in the urine for one or two weeks (in some cases longer) after the injection of these substances into the veins. On the other hand, it is known that salvarsan disappears from the blood in the course of one or two days. It has therefore been suggested that secondary deposits of arsenic are formed in the organs from which the arsenic is gradually eliminated. Dr. Young has shown that long after all free salvarsan or free neo-salvarsan has been eliminated from the blood, arsenic can be found combined with the proteins of the blood-serum. These substances have been injected into the veins of goats, from which blood has been drawn after various intervals of time. After the blood has clotted, the serum is separated. The serum has been placed in bags of parchment and dialysed in running water, or, in some cases, in salt solutions, so that the globulins of the serum will not be precipitated by removal of the salts holding them in solution. The dialysis has been continued until the water outside the bag fails to give any reaction for arsenic after its concentration. The serum is then considered to be free from unbound salvarsan or neo-salvarsan. The dialysed serum is poured out of the bags, and a portion decomposed with sulphuric and nitric acids, and tested for the presence of arsenic. Arsenic has been found present when the blood from which the serum has been obtained has been taken from the goat any time up to three weeks after the preliminary injection. As a control, a sample of blood has been removed when the drug was administered. The serum from this blood has been treated in the same way, and found to be on all occasions free from arsenic. To determine the nature of the substance to which the arsenic has been affixed, another portion of the dialysed serum has been precipitated with a solution of tannic acid. The precipitate, which is composed of the proteins of the serum, has been shown to contain arsenic. When an inorganic compound of arsenic, such as arsenious acid, has been injected into a goat, the serum has been found free from arsenic after dialysis. Previous experiments carried out with compounds containing arsenic, similar to salvarsan in constitution, render it probable that the imino- or amino-groups in these compounds serve as links for their anchorage to the protein molecule. Dr. Young has determined the time required for the elimination of salvarsan and neo-salvarsan from the blood, as evidenced by the failure of a suitable colour test for these substances, and he has tested at the same time for arsenic bound to the proteins of the serum. He finds with salvarsan that a faint colour reaction for salvarsan is yielded after twenty-four hours, and that this faint reaction fails after six days. A strong reaction for arsenic is given by the dialysed serum for six days after the injection, and a faint reaction after nineteen days. The reaction is lost in 28 days. Similar data have been obtained

with neo-salvarsan, though the reaction for the drug fails in forty-eight hours. From these results it is evident that the arsenic, which is bound in the blood, is eliminated slowly, whereas the bulk of the salvarsan or neo-salvarsan is quickly secreted, so that only a trace is present in the blood after the first twenty-four hours.

The following experiment has been carried out to ascertain in what portions of the blood arsenic is retained. Blood has been taken from a goat, which has been bled seven days after an injection of neo-salvarsan. By this time all free neo-salvarsan has been excreted. The blood has been defibrinated, and the corpuscles separated from the serum by the centrifuge. The red corpuscles have been washed repeatedly with salt solution, decomposed and tested for arsenic. Arsenic is present. The fibrin has also been washed and treated in the same way. Arsenic is absent. Arsenic has been found in the serum after dialysis. It appears that arsenic is retained in the blood corpuscles, as well as in the serum.

In connexion with these experiments, it is advisable to consider some previous observations on the protective action of sera, collected at various intervals after the intravenous injection of these drugs, on the infection of mice with trypanosomes. The sera were tested for the presence of these drugs by the same colour test as has been used by Dr. Young. A parallelism was found between the protective action of the sera against infection with trypanosomes and the intensity of the colour test. As long as the serum yielded a colour reaction, it served to guard against infection. This action endured for seven days with salvarsan and for forty-eight hours with neo-salvarsan. Some observations made on the effect of heating the sera showed that the protective action and the intensity of the colour test were augmented by warming sera to 56° C. It thus seems that the chemical and biological tests yield similar conclusions.

In regard to the quantities involved in these experiments, the amounts injected into the goats have varied from 0.75 gm. to 0.9 gm. of either substance. The amount of serum used for the demonstration of the presence of arsenic has been 50 c.cm. The quantity of arseno-benzol derivative utilized is closely similar to that employed for therapeutic purposes in man.

#### RECRUITING OF MEDICAL STUDENTS.

At a meeting of the General Medical Council of the United Kingdoms of Great Britain and Ireland, held in London on November 6, 1915, after consultation with the members, the President made the following public statement:—

The President of the General Medical Council is requested by the Council to inform the Licensing Bodies, Medical Schools, and approved Teaching Institutions, that the Director-General of the Army Medical Service has intimated to the Council his entire agreement with the Earl of Derby's decision regarding the recruiting of medical students, namely, that it is the duty of medical students (other than those in the fourth and fifth years of study) to join His Majesty's forces. The President hopes that in every medical school steps will be taken to convey this information to the students who are eligible for military service,

<sup>1</sup> *Biochemical Journal*, Vol. IX., p. 479, 1915.

## Abstracts from Current Medical Literature.

### SURGERY.

#### (123) Varicose Veins and Ulcers.

J. Homans is of opinion that varicose veins and ulcers are frequently unrelieved because the anatomical and physiological conditions underlying these changes are not understood, and the proper treatment is not employed (*Surg., Gynec. and Obstet.*, February, 1916). He analyses the anatomy and physiology of the venous system of the lower extremities, and discusses the aetiology and pathology of varicosity, illustrating his points by citing typical cases. He finds that varicosity of the veins of the legs is confined to the superficial and perforating vessels. Trendelenburg's test of raising the leg until the veins empty themselves and then watching to see if lowering them is followed by a sudden overdistension may be used to distinguish between pure surface varix and surface varix complicated by varicosity of the perforating veins. This distinction is assisted by a modification of the test, in which the surface veins are compressed after having been emptied by elevation. Surface varix is curable by excision of the great saphenous vein from the groin to the mid-calf. When the perforating veins are implicated, it is necessary, in addition to the removal of the great saphenous vein, to dissect out the varicose perforating vein and to ligature it. Varix following phlebitis is usually complicated by varicosity of the perforating veins, and is frequently accompanied by obstinate ulceration soon after its establishment. The author is of opinion that the more prominent and tortuous the surface veins, the simpler the cure. Varicose ulcers, especially those of the callous type, are best treated by free excision and immediate skin grafting, in connexion with the radical removal of the veins to which they are tributary.

#### (124) Fracture of the Skull.

F. A. Besley (*Journ. Amer. Med. Assoc.*, January 29, 1916) has collected the records of 1,000 cases of fracture of the skull and of 74 autopsies. On this material he reviews the whole question of the pathology and diagnosis of cranial fracture. Fracture is said to occur either as the result of inbending of the skull at the point of contact of the blow or by reason of the bursting of the skull at a point some distance from the applied force. The latter theory has its basis on experimental evidence. If a hollow sphere is compressed there is a tendency for it to break in a meridian parallel to the applied force. The author points out that the skull is not a hollow sphere, its walls are not of uniform thickness, and the fracturing force is very rarely applied at two given points. He holds that fractures of the base, which are not associated

with fracture of the vault, are usually caused by inbending force applied through the articulation of the condyles and the atlas. The fracture is frequently situated in the middle fossa, where the bone is thinner than elsewhere. Fracture of the base was associated with fracture of the vault in over 70% of the cases studied *post mortem*. This association was noted in only 33% of the 1,000 cases. He interprets this discrepancy as evidence of the difficulty of a clinical localization of the line of fracture. The diagnosis may be very difficult when the scalp is intact. The only certain means is examination by X-rays. Signs of increased intracranial pressure are usually present. Signs of compression or focal signs of cortical injury are strong presumptive evidence of fracture. Continuous bleeding from the ear is almost pathognomonic of fracture of the base and escape of cerebro-spinal fluid or brain substance is absolutely pathognomonic. Free bleeding from the orbital cavity occurs at times. Bleeding from the ears with or without the admixture of cerebro-spinal fluid occurred in 31.5% of the 1,000 cases. Free bleeding from the mouth is also common. Ecchymosis near the seat of fracture at the external angular process or over the mastoid or about the occiput is very suggestive of fracture. Spinal puncture should not be carried out if the diagnosis can be made without it. There is grave danger of immediate death due to the forcing of the pons and medulla into the *foramen magnum* as a result of the sudden relief of excessive intraspinal pressure. The author expresses surprise at the record of the pulse rate in the 1,000 cases. Only in a few cases was it slow. The rate is relatively high in fatal cases. The respiratory records are not characteristic. Vomiting is common, pupillary changes are not infrequent, and other signs of nervous origin are noted in a few cases.

#### (125) Quiet Hip Disease.

H. L. Taylor and W. Frieder have collected notes on 22 cases of Perthes' disease occurring in their practice, and discuss the condition on the basis of their observations (*Surg., Gynec. and Obstet.*, February, 1916). This disease, which is also known as "quiet hip disease," or osteochondritis of the hip, was first described in 1913. It must be distinguished from tubercular, syphilitic and other serious diseases of the hip joint. It occurs as a rule between the ages of five and ten years. There is usually but little limp and no pain. More rarely the onset is febrile. In four of their cases the condition follows trauma. Mobility of the hip is only slightly restricted at first. Later, lateral movements and rotation in flexion may be limited. The plane of flexion is usually deviated outwards, but free flexion is preserved. Shortening may be absent, and is rarely considerable. Trendelenburg's symptom is present. Abscess, enlarged glands, ankylosis and toxæmia are never met with. Radiological examination reveals a flattened epiphysis, which may appear to be di-

vided into separate pieces. The epiphyseal line is irregular and broader than normal. The affection lasts from one to three years, and terminates in recovery with a good, though remodelled joint. The authors are of opinion that the condition is a dysostosis of unknown causation, and point out that it is one cause of osteo-arthritis of the hip in adults.

#### (126) Subdeltoid Bursitis.

The deposit of lime salts in the neighbourhood of the shoulder joint has been described by Stieda, and has been localized by him and by other observers in the subdeltoid bursa. Wrede, Codman and Brickner have expressed the opinion that these deposits, which can be detected radioscopically, are in the tendon of the supraspinatus, or at times in that of the infraspinatus. A. H. Montgomery (*Journ. Amer. Med. Assoc.*, January 22, 1916) records a case in which he was able to prove that the subdeltoid bursa was the site of the deposition. The patient suffered very severe pain in the anterior aspect of the shoulder. The pain was reflected downwards to the elbow and into the neck, along the course of the brachial plexus. The arm was held tightly to the side, and a vigorous spasm developed when an attempt was made to abduct the arm. The skiagram showed a very distinct shadow capping the greater tubercle of the humerus and extending upwards under the acromion. It was separated from the tubercle by a distinct space. The treatment employed was dissection. The bursa under the deltoid was removed, and a thin fat transplant was inserted free in its place. The pain was cured. It was found that the deposit was limited to the upper wall of the bursa. At times these deposits disappear under massage and heat.

#### (127) Pericystitis After Appendicitis.

E. H. Eising (*Med. Rec.*, January, 1916) records the histories of two cases of pericystitis secondary to a suppurative focus in the appendix. In both these cases the symptoms of pericystitis masked the initial lesion in the appendix. In the first case, hæmaturia attracted attention, and suggested the diagnosis of carcinoma. A transperitoneal operation revealed a gangrenous appendix intimately adherent to the posterior wall of the bladder. The symptoms of pericystitis subsided at once with the removal of the appendix. In the second case, a young man complained of sudden and severe vesical pain, with frequent and painful micturition. On the fifth day of illness the appendix was removed. Convalescence was uneventful. Attention had been directed to the appendix by tenderness in the right iliac fossa, and by the history of the preceding case.

### GYNÆCOLOGY AND OBSTETRICS.

#### (128) Obstetric Advances, 1915.

Polak (*Med. Times*, January, 1916) briefly reviews the more important ad-

vances made in obstetrics during 1915. He asserts that one of the chief advances is the better understanding of the use and the dangers of pituitary extract. Clinical experience has limited its indications to secondary inertia when there is no hysteria, and the head is low and the cervix fully dilated, and in third stage inertia after the placenta is delivered. When used haphazard its main dangers are asphyxiation of the child and rupture of the uterus. In 33 cases the effect upon the child was as follows:—20 were born in excellent condition; 6 slightly asphyxiated; 5 extremely asphyxiated; 3 lived but a short time; and two were dead born, both of whom were known to be alive before the extract was given. The year, 1915, has also brought about a more sane employment of anaesthesia in obstetrics. In selected cases, where labour is already established, morphine and scopolamine amnesia relieve the pain incident to the dilatation stage, and its employment in the first stage has no deleterious effect whatever on either mother or child, and favours normal dilatation. Gas and oxygen employed with the crescendo of each pain hold a similar relation to the second stage. Pubiotomy and Caesarean section are finding wider indications in relation to the life of the child. Williams reports at length the favourable effect of pubiotomy on the course of subsequent labours. He claims spontaneous delivery in the majority of cases. It is especially useful in the funnel pelvis. In contractions of the superior strait the aim should be to differentiate between those requiring Caesarean section at the onset of labour and those in whom a spontaneous outcome may be reasonably expected. When the prognosis in the latter cases proves erroneous after a prolonged second stage, pubiotomy should be done. Definite infection contra-indicates division of the pubic bones. With elective Caesarean section an adequate test of labour and pubiotomy obstetricians can definitely abandon the induction of premature labour in the treatment of contracted pelvis. A decided advance has been made in the treatment of febrile abortions. Bentham and Montgomery have shown that both the morbidity and mortality in incomplete febrile abortions are reduced by allowing nature to expel the uterine contents; especially is this so in the case of hæmolytic streptococci infection. To break down the protection of the leucocytic wall and small round cell infiltration beneath the decidua by the use of the meddlesome curette is bad surgery. Williams has made an interesting contribution to the study of uncontrollable hæmorrhage in certain cases of accidental separation of the placenta. He shows disorganization of the uterine muscle to be present owing to the large quantities of blood lying between the muscle fibres. This would explain the failure of the uterus to contract under oxytocic stimulation. Williams divides these cases into mild and severe; the former may be treated by the Dublin method of Tweedy, the latter demands radical

measures, i.e., tamponade aortæ, compression and hysterectomy. Caesarean section should be the operation of choice in the concealed variety, except in the rare cases in which the cervix is fully dilated.

#### (129) Gynæcological Advances, 1915.

Polak (*Med. Times*, January, 1916) summarises the advances in gynæcology for 1915, which he states are chiefly clinical. The campaign for the early diagnosis of cancer of the uterus has met with only small success, and there is a tendency amongst surgeons to revert to less radical procedures, particularly to vaginal hysterectomy with the electric cautery clamp. The principle of Percy seems to have been generally accepted, namely, that the knife spreads the disease through the lymphatics, while heat kills the cancer cells and seals the avenue of extension. Clark and Cobb have reported good results in advanced cases by tying the ovarian and internal iliac arteries, especially when combined with the Percy desiccation method with the cautery. Radium has not had the expected results, and should be reserved for those cases for which the removal by operation is out of the question. The advantage of radium over X-rays is that it can be placed directly in contact of the disease. It should be given in massive doses. Much has been done in the treatment of uterine hæmorrhage by roentgenologists. Pfahler recommends X-rays in myomata in older women with advanced anæmia; in all elderly or young women with marked organic heart disease, diabetes mellitus, chronic nephritis, lung disease, and goitre with acute symptoms. The older the patient the greater the indication. Under 40, it is not the treatment of choice. It is contra-indicated in pedunculated fibroids, or where the tumour can be removed without destroying the reproductive organs. In malignant or gangrenous degeneration of fibroid, or in tumours associated with diseases of the adnexa. Much has been written on the fate of the conserved ovary after hysterectomy. While it is generally admitted the ovaries should be removed in women over 45, and conserved in young women, there seems to be an accumulating mass of clinical evidence showing that the conserved ovary has not only its circulation but its innervation interfered with by hysterectomy, and so becomes a disturbing factor. Furthermore, it has not been proved that conservation of the ovary after removal of the uterus maintains the internal secretion. Vineberg does not retain the ovaries in any case of hysterectomy unless he can leave enough of the lower segment of the uterus to ensure menstruation, for the knowledge imparted to the woman that her ovaries have not been removed has little significance or moral effect when she learns that she will no longer menstruate. Luffier, in Paris, and Simpson and Chalfont, in America, have transplanted the ovaries from one woman to another (homoplastic trans-

plantation), and in the same woman (autoplastic transplantation) to maintain the internal secretion of the ovary. Luffier is of opinion that when the uterus, or part of it, is left *in situ* autografting operations are justifiable. All observers agree that ovulation without menstruation is altogether useless, so that transplantation should never be attempted when the uterus is absent. Luffier grafts in the sub-peritoneal fat, and Simpson and Chalfont in the subcutaneous tissue, near the anterior superior spine of ilium. Homoplastic transplantation is rarely successful. They also assert that degeneration is common in the transplanted ovary after a longer or shorter interval. Simpson and Chalfont, comparing their results with 150 patients from whom both ovaries have been removed, have found that the symptoms of premature menopause were less prominent, and the patient had less discomfort when an ovarian graft was made. Tyler compares the relative advantage of total versus subtotal hysterectomy, with special reference to the occurrence of cancer in the cervical stump. Clark advocates the value of desiccation in the treatment of venereal warts, condylomata pruritis vulvæ, localized epitheliomata, and urethral caruncle. The current has anæsthetizing properties, and seals the channels through which metastasis takes place, and has the advantage of producing no disfigurement by an absence of cicatricin contraction.

#### (130) Uterine Prolapse.

C. H. Mayo (*Surg., Gynaec. and Obstet.*, March, 1915) discusses uterine prolapse, indicating the most appropriate sphere for the various modern operations devised for the radical cure of this condition. He points out that it is really a form of hernia, and in its severer forms the prolapse of the bladder as a cystocele and vaginal walls are the important factors in any operative procedure undertaken for a cure. For the simpler type, any operation that will restore the uterus to its normal antverted position in the pelvis, with restoration of the relaxed vaginal outlet will prove satisfactory. In more pronounced varieties of prolapse, the operation, which will restore the bladder and vaginal walls to their normal situation, will be the operation of choice. Mayo limits the use of such operations to the fourth decade of the woman's life. Beyond that period, owing to the atrophy of the uterus, it forms an insufficient support to the bladder and vagina, and he cites instances when a return of the hernia has occurred, rendering the condition worse than before. Mayo recommends for women of 40 to 65 ablation of the uterus, with suturing of the broad and round ligaments, so that a complete diaphragm is formed across the pelvis, on which the bladder rests. This, with a good restoration of the over-distended vagina, has given good results in his hands.



## British Medical Association News.

### MEDICO-POLITICAL.

The Medical Politics Committee of the Council of the New South Wales Branch of the British Medical Association beg to draw the attention of members to the following notice:—

#### "Common Form of Agreement between Medical Officer and Friendly Society Lodge.—Mileage.

"In view of the fact that the impression has got abroad that charging mileage in certain cases is optional, the Council would impress upon members the necessity for strict adherence to the terms and conditions of the Common Form of Agreement between Medical Officer and Friendly Society Lodge."

Dr. Thomas Myles and Dr. H. A. E. Noble have been nominated for election to the New South Wales Branch.

## Naval and Military.

The P.M.O., 2nd Military District, asks for the insertion of the following notice:—

Medical practitioners are requested to notify the military authorities at once when called in to attend a soldier, either returned or from a local camp. In the case of a returned soldier, the report should be sent to the Staff Officer for Invalids, District Headquarters, Victoria Barracks, Paddington, and in the case of men from local camps, to the Camp Commandant in the District.

It is advisable in forwarding this report to give the man's full name, rank, regimental number, and unit.

Before complying with this request, medical practitioners are asked to read the article in this journal entitled "Medical Reports to the Military Authorities."

We learn from the 155th list of casualties, issued on March 20, 1916, that Captain R. McD. Bowman has returned to duty.

From the 15th casualty list, we learn that Lieutenant-Colonel J. B. St. Vincent Welch has returned to duty.

The following notice has appeared in the *Commonwealth of Australia Gazette*, No. 37, under date of March 23, 1916:—

His Excellency the Governor-General, acting with the advice of the Federal Executive Council, has been pleased to approve of the following changes, etc., in connexion with the Australian Military Forces, viz.:—

#### 1st Military District.

##### Australian Army Medical Corps Reserve—

Honorary Major E. S. Jackson to be Honorary Consultant Surgeon, with honorary rank of Lieutenant-Colonel. Dated 1st March, 1916.

#### 4th Military District.

##### Australian Army Medical Corps—

Arthur Murray Cudmore to be Honorary Consultant Surgeon, with honorary rank of Lieutenant-Colonel. Dated 1st March, 1916.

##### Australian Army Medical Corps—

The appointment of Lieutenant-Colonel (temporary Colonel) A. E. Shepherd as Deputy Director-General Medical Services, is terminated. Dated 27th December, 1915.

The appointment of Major F. A. Maguire as Staff Officer to Director-General Medical Services is terminated. Dated 9th February, 1916.

His Excellency the Governor-General, acting with the advice of the Federal Executive Council, has been pleased to approve of the following appointments being terminated in the Australian Imperial Force, to take effect from dates shown opposite names:—

Lieutenant-Colonel A. M. Cudmore. Dated 29th February, 1916.

Major E. S. Jackson. Dated 23rd January, 1916.

## Public Health.

### THE HEALTH OF NEW SOUTH WALES.

The following notifications have been received by the Department of Public Health, New South Wales, during the week ending March 11, 1916:—

	Metropolitan Combined Districts.		Hunter River Combined Districts.		Remainder of State.		Total.
	Cs.	Dths.	Cs.	Dths.	Cs.	Dths.	
Enteric Fever ..	36	3	5	3	43	3	84
Scarlatina ..	42	0	4	0	73	1	119
Diphtheria ..	100	2	11	0	94	0	205
Infantile Paralysis	11	1	1	0	6	0	18
Tuberculosis ..	24	8	—	0	—	—	24
Malaria ..	2	0	—	—	—	—	2

The following notifications have been received by the Department of Public Health, New South Wales, during the week ending March 18, 1916:—

	Metropolitan Combined Districts.		Hunter River Combined Districts.		Remainder of State.		Total.
	Cs.	Dths.	Cs.	Dths.	Cs.	Dths.	
Enteric Fever ..	35	3	4	0	38	3	77
Scarlet Fever ..	65	0	2	0	90	1	157
Diphtheria ..	101	0	4	0	101	3	206
C'bro-Sp'l Menin.	1	1	0	0	0	0	1
Infantile Paralysis	18	1	0	0	7	0	25
Pul. Tuberculosis	32	4	1	0	0	0	33
Malaria ..	1	0	0	0	0	0	1

### THE HEALTH OF VICTORIA.

The following notifications have been received by the Department of Public Health, Victoria, during the week ending March 12, 1916:—

	Metro- politan.		Rest of State.		Total.
	Cs.	Dths.	Cs.	Dths.	
Diphtheria ..	58	3	38	9	96
Scarlatina ..	7	0	16	0	23
Enteric Fever ..	2	0	21	0	23
Pulmonary Tuberculosis	17	5	11	6	28

The following is the number of cases of cerebro-spinal meningitis notified to the Board during the week ending March 12, 1916:—

	Metropolitan Area. Cases.	Rural Districts. Cases.	Totals. Cases.
Military ..	—	—	1
Civil ..	6	1	7

The following notifications have been received by the Department of Public Health, Victoria, during the week ending March 19, 1916:—

	Metro- politan.		Rest of State.		Totals.
	Cs.	Dths.	Cs.	Dths.	
Diphtheria ..	84	3	35	0	119
Scarlet Fever ..	13	0	14	0	27
Enteric Fever ..	10	0	25	2	35
Pulmonary Tuberculosis	22	6	9	2	31

The following is the number of cases of cerebro-spinal meningitis reported to the Board during the week ending March 19, 1916:—

	Metropolitan Area. Cases.	Rural Districts. Cases.	Totals. Cases.
Military ..	—	—	1
Civilian ..	4	1	5

### INFECTIVE DISEASES IN QUEENSLAND.

The following notifications have been received by the Department of Public Health, Queensland, during the week ending March 18, 1916:—

Disease.	No. of Cases.
Erysipelas ..	3
Diphtheria ..	14
Enteric Fever ..	48
Scarlet Fever ..	12
Pulmonary Tuberculosis	4
Cerebro-Spinal Meningitis	2
Infantile Paralysis	1
Total ..	84

## INFECTIVE DISEASES IN WESTERN AUSTRALIA.

The following notifications have been received by the Department of Public Health, Western Australia, for the week ending March 11, 1916:—

District.	Enteric Fever. Cases.	Diphtheria. Cases.	Scarlet Fever. Cases.	Pulmonary Tuber- culosis. Cases.	Cerebro- Spinal Meningitis. Cases.
Fremantle ..	—	—	—	1	—
Melville ..	—	1	—	—	—
Fremantle N. ..	1	—	—	—	—
Cottesloe ..	1	—	—	—	—
Subiaco ..	—	3	—	—	—
Perth ..	2	5	1	6	—
Victoria Park..	—	—	—	1	—
Belmont ..	1	1	—	—	—
South Perth ..	—	—	1	—	—
Bellevue ..	—	—	—	1	—
Northam ..	—	—	—	1	—
Mundong (Katan- ning) ..	—	—	—	—	1
Burswood ..	1	—	—	—	—
Westonia ..	—	1	—	—	—
Ora Banda ..	—	—	—	1	—
Meckering ..	—	—	—	1	—
Geraldton ..	1	1	—	—	—
Walkaway ..	—	1	—	—	—
Wagin ..	1	—	—	—	—
Collie ..	—	1	—	—	—
Totals ..	8	14	2	13	1

## SMALL-POX IN NEW SOUTH WALES.

One case of small-pox was reported from Newcastle to the Department of Public Health, New South Wales, during the week ending March 19, 1916.

## INFECTIVE DISEASES.

The Official Bulletin issued by the Federal Quarantine Bureau under date of March 10, 1916, contains the following information:—

No vessels from overseas were quarantined.

## Plague.

The total number of cases reported in Ceylon during the year 1915 was 139. Seventeen cases have been reported up to January 29, 1916. Thirty-five cases, with 20 deaths, occurred in Egypt from January 1 to February 3, 1916. The bill of health from Honolulu, dated February 14, 1916, reported that the last case of rat plague occurred at Paauhau on January 18, 1916, and the last case of human plague on December 16, 1915. No further report has been received from Hong Kong, Mauritius and New Caledonia. In India, 45,869 cases, with 34,883 deaths, occurred from December 19, 1915, to January 29, 1916. From January 1 to January 14, 1916, 310 cases, with 300 deaths, were reported in Java. It has been officially reported that all cases of plague have disappeared from Paraguay. The last case notified in the Philippine Islands was reported on September 12, 1914. In the Orange Free States, South Africa, 20 cases, of which 12 proved fatal, have been notified since the beginning of the outbreak. One fatal case was reported at Singapore, Straits Settlements, on February 23, 1916.

## Cholera.

No further reports of cases have been received from the Dutch East Indies and the Straits Settlements. In the Philippine Islands, 15 cases, with 9 deaths, occurred from January 15 to February 11, 1916.

## Small-Pox.

No further reports have been received from the Dutch East Indies. In the Philippine Islands, six cases of varioloid, with no deaths, occurred from January 15 to February 11, 1916. Thirteen cases, with six deaths, have been reported from January 4 to January 31, 1916, from the Straits Settlements.

## HEALTH OF THE METROPOLIS OF SYDNEY.

The mortality return for February, as supplied by the Government Statistician, shows that 638 deaths occurred in the metropolis, including 39 deaths of individuals previously resident outside the metropolis, and deaths classified

as taking place in the islands and shipping in the harbour.

Thus, calculating on an estimated population of 763,000, the annual death-rate for the month works out at 10.08 per 1,000 of the population.

Deducting the deaths of persons, non-residents of the metropolis, in the Mental Hospitals of Leichhardt and Hunter's Hill (Callan Park and Gladesville), and adding the deaths of persons, residents of the metropolis, occurring at the Benevolent Asylums, Mental Hospitals and Consumptive Sanatoria situated outside the metropolis, the number of deaths was 608, giving a corrected death-rate of 9.56 per 1,000.

Among children under one year of age, 113 deaths were recorded for the metropolis.

There were 1,677 births during the month, giving a rate of 26.40 per 1,000 of the population, which is slightly below the average of the previous five years.

The infantile mortality rate was 72 per 1,000 births, which is 6% below the average for February of the previous five years.

Infectious diseases were responsible for 26 deaths, of which two were due to measles, four to whooping cough, seven to diphtheria, seven to typhoid fever, one to cerebro-spinal fever, two to erysipelas, and three to puerperal fever.

Diarrhoeal diseases were credited with 64 deaths, phthisis caused 37 deaths, cerebral hæmorrhage 15, cancer 57, diseases of the heart and blood vessels 92, Bright's disease 49, and accident or negligence 24. Compared with the average in February for the previous five years, there were increases in the number of deaths from diseases of the heart, Bright's disease, cancer and accident, with decreases in senility, cerebral hæmorrhage and diarrhoeal diseases.

Two hundred and eighty cases of scarlet fever, 350 of diphtheria, 107 of typhoid fever, 45 of infantile paralysis, 6 of cerebro-spinal meningitis, 10 of malaria and 107 of pulmonary tuberculosis were notified during the month of February. Seventeen cases of phthisis (consumption of the lungs and consumption of the throat) were notified under the City Council's By-laws, and nine premises were disinfecting by the Council's trained staff after the death or removal of the patients.

## Hospitals.

## QUEEN'S MEMORIAL INFECTIVE DISEASES HOSPITAL.

At a meeting of the Board of Management of the Queen's Memorial Infectious Diseases Hospital held on March 8, 1916, a report of the Sub-Committee, consisting of Dr. Jeffreys Wood and Messrs. Wilks and Stone, appointed to consider the extension of accommodation, was discussed. The report contained plans for the erection of extensions which would provide for 600 beds. Large verandahs and balconies had been attached to the buildings, so that in times of epidemics considerably more than 600 patients could be treated. Accommodation was also provided for 192 nurses, 60 maids, and also for doctors, matron and housekeeper. With this accommodation, the hospital could deal with 300 cases of diphtheria, 200 of scarlet fever, 24 of measles and 24 of whooping cough. The total cost of the proposed new buildings was estimated at £43,500. The report was adopted, and a resolution carried that the report be forwarded to the Minister for Health.

## TASMANIAN CONSUMPTIVES' SANATORIUM.

The Annual Report of the Committee of the Tasmanian Consumptives' Sanatorium at New Town for the year ending June 30, 1915, has been issued, together with the medical report, the Honorary Architect's report, and a financial statement. There were 18 patients in the Sanatorium at the beginning of the year. Sixty-two patients were admitted during the year, and 16 were still in the Institution at the end of the year. The total number of patients who have been under treatment in the Sanatorium since its foundation in 1906 was 328. The Medical Officer's report states that the patients from the northern end of the island are usually in a more advanced stage of the disease than those

from the south, and that, consequently, the value of the Sanatorium treatment is considerably lessened. Of those discharged during the year, 31 are regarded as arrested. All active signs of the disease had disappeared, and the patients were restored to normal health. In 21 the patients were considerably improved, while in seven patients no improvement was noted. Three patients left the Sanatorium within a week of admission. These cases are therefore excluded from the statistics. The average stay of each patient was 123 days. The average gain in weight was just over 11 lbs. A recommendation was made for the establishment of a farm in connexion with the Sanatorium where convalescent patients could be employed for some months before returning to their homes. The treatment employed in the Sanatorium includes graduating exercises, and, in selected cases, tuberculin.

The Government has provided two chalets containing four beds each, an additional storey to the administrative building, the installation of electric light and fire appliances throughout the institution. It is stated that although the necessity of the bacteriological examination of sputum is recognized, no microscope has been provided for this purpose.

The expenditure for the year amounted to £1,192. Of this sum, £1,063 were required for salaries, maintenance, etc. The income amounted to £886, including £200 from the Government, £426 from special benefactions and donations, £180 from patients' fees and sundry smaller amounts. A sum of £465 was brought over from the previous year, and this has been reduced to £160 by the excess of expenditure over income.

#### CHARTERS TOWERS DISTRICT HOSPITAL.

The Annual Report for the year 1915 of the Board of Management of the Charters Towers District Hospital has been presented to the Annual Meeting of Life-Governors, Governors and Contributors. There were 64 patients in the Hospital at the close of 1914. During the year 1915, 1,128 persons were admitted, and on December 31, 1915, the treatment had not been completed in 76 instances. The total number of patients who were discharged or who died was therefore 1,116. There were 95 deaths. In 27 cases death occurred within 48 hours of admission, and in 23 the patient was over 70 years of age. The condition of patients on discharge is not given. The average number of patients in the hospital was 75.93.

In the out-patient department a very large number of patients received medical attendance, no less than an average of 29.2 attendances being accorded each day.

The financial condition of the hospital has given the Board some anxiety, while sources of revenue yield diminishing incomes, the price of commodities has increased very greatly. It is pointed out that the bill for butter, meat, milk and bread is £382 more than it was last year. The cost of drugs, as has been pointed out in these columns, has advanced by leaps and bounds. Owing to these diminished resources it had been found impossible to proceed with the erection of the kitchen and laundry, both of which are urgently necessary.

The revenue from all sources amounted to £6,083, including a Government endowment of £3,774, which is £200 more than the subsidy of the previous year. There was a bank balance of £692 brought over from the preceding year and fixed deposits to the value of £1,000. The expenditure amounted to £5,990, and bank balances totalling £1,875 have been brought over to the 1916 account. The charitable public has been invited to lend their assistance to this excellent institution, in order that the current year's income may cover the outgoings. We feel sure that the economy exercised in 1915 will stimulate the charitable to increase their support.

During the course of the year Dr. W. R. Kelly, the Resident Medical Superintendent, was granted leave of absence to enable him to go to the front. Difficulty has been experienced in securing the services of a substitute. At first, Drs. Woodburn-Stevens and W. J. Fearnley placed their services at the disposal of the Board, and on January 24 Dr. T. R. Edmeades undertook the duties of Resident Medical Superintendent.

#### ORANGE DISTRICT HOSPITAL.

The record of the work completed in the Orange District Hospital during the year 1915 is contained in the Annual Report. On January 1, 1915, there were 38 patients in the hospital, and, during the year, 670 were admitted. Thirty-three patients were in the hospital on December 31. Of the 673 patients in whom treatment was completed, 53 died, 510 were discharged in good health, 82 were relieved and 30 were not benefitted by treatment. A relatively large number of persons were treated for infectious diseases. There were 58 cases of diphtheria and 38 of scarlet fever or scarlet fever and measles. Only one of these 96 patients died. The average number of patients in the institution was 29.17, and the average cost per patient per annum was £89 8s. 9d.

The Hospital Dispensary, which is under the supervision of Dr. Roberts, has provided means for the treatment of 708 patients. The medicines dispensed cost the sum of £202, which compared very favourably with the expenditure of £269 for medicines for 600 patients in the year 1913. This achievement is all the more noteworthy because the prices of drugs have increased very considerably since the outbreak of war.

The maintenance for the year amounted to £2,611, including £1,099 for salaries and wages. The income totalled £2,533, including a Government subsidy of £769 and a special grant of £300. The patients' fees amounted to £520, subscriptions amounted to £103 and donations £456. Entertainments brought £361 into the hospital's coffers. The year was begun with a balance of £400, and ended with one of £322.

At the monthly meeting of the Committee of the Geelong Hospital, held on March 8, 1916, it was stated that the Committee were unable to obtain the services of a qualified medical man as Resident Medical Officer in succession to Dr. J. L. Trinca, who was forced to relinquish his position by ill-health. Dr. Kennedy stated that the Honorary Staff would carry on the work, but were anxious to have a senior student in residence. He thought it would be necessary to offer more salary if the hospital required the services of a resident.

The action brought by Dr. H. B. Ellerton, Inspector of Asylums for Queensland, against the proprietor of the *Brisbane Daily Mail* for damages to the extent of £10,000 for alleged defamation, in articles referring to the condition of Goodna Asylum, came before his Honour the Chief Justice, Sir Pope Cooper, in the Supreme Court, at Brisbane, on March 15, 1916. Upon being informed that the case would probably extend over a number of days, his Honor adjourned the hearing until March 27, when Mr. Justice Lukin will hear the action.

### Special Correspondence.

(By Our Special Correspondent.)

#### LONDON LETTER.

##### King Edward's Hospital Fund.

A meeting of the Governors and General Council of King Edward's Hospital Fund for London, for the purpose of awarding grants to the hospitals, convalescent homes, and consumption sanatoria for the present year, was held on December 16, 1915, at St. James's Palace, the Speaker of the House of Commons being in the chair.

The following letter from the King was read by the Speaker:—

Buckingham Palace,  
15th December, 1915.

Dear Sir,—

I am commanded by the King to ask you to convey to the Governors and General Council of King Edward's Hospital Fund his congratulations on the maintenance of the distribution at the same amount as last year.

His Majesty is interested to see that the total amount distributed by the Fund since its foundation, nineteen



years ago, now exceeds £2,000,000—a convincing proof of the success of the scheme inaugurated by his late Majesty King Edward.

His Majesty trusts that the Fund will continue to receive the generous support of the public, and will thus be enabled effectively to assist the hospitals of London in carrying on their beneficent work during these times of difficulty.

Yours very faithfully,  
STAMFORDHAM.

To the Presiding Governor,

King Edward's Hospital Fund for London.

Lord Revelstoke, the Hon. Treasurer, in reporting that the amount received for general purposes by the Fund to December 11, after payment of expenses, was £125,575, said that it was satisfactory to notice, especially during the difficult times which the financial world had been passing through in the last eighteen months, that the income from investments for 1915 exceeded that for 1914 by about £14,000.

Sir William Collins made the annual statement on behalf of the League of Mercy, and said the League was happily in a position, at the close of the current year, again to contribute £14,000 to the Fund, as in 1913 and 1914, thus making a total of £230,000 contributed by the League to the Fund since the foundation of the former in 1899. It had been a difficult year for the League. The stringency of money, the rival claims of other Funds, the fact that many of their workers were engaged in war service, made the year a very difficult one, and, had they not been able to urge that the voluntary hospitals were themselves doing admirable war service, it would probably have been impossible to present such a satisfactory report.

Sir William Church presented the report of the Distribution Committee, and announced that the sum available for distribution among the London Hospitals was £133,560, being the same amount as in 1914.

After calling attention to points of importance in the report, he asked the Honorary Secretary to present the list of awards.

The adoption of the report and awards was moved from the chair by the Speaker, seconded by Mr. Walter Morrison, and carried unanimously.

Sir Savile Crossley then announced that Sir Ernest Cassel proposed to give again, as in 1911, £50,000 to hospitals, this time in the form of 4½% War Loan Stock. Of this, £28,000 would, if accepted by the Governors and General Council, be given to the Fund to be distributed amongst the hospitals, convalescent homes, and consumption sanatoria receiving grants from the Fund this year, in amounts equal to one-fifth of the grants made by the Fund. The remaining £22,000 had been allocated to hospitals and kindred institutions in London and the country. To King's College Hospital, £500; Guy's, £1,000; London, £800; Royal National Orthopaedic, £600; West London, £600; "Dreadnought," £700; Charing Cross, £750; Middlesex, £500; Prince of Wales's, £600; University College, £600; Hospital for Women (Soho Square), £550; St. Bartholomew's, £1,000; St. Thomas's, £750; and £1,000 to each of the following: Addenbrook Hospital (Cambridge), Victoria Hospital (Bournemouth), West Suffolk Hospital (Bury St. Edmunds), Royal Hampshire County Hospital (Winchester), Victoria Hospital (Blackpool, Lancashire), Royal National Hospital for Consumption (Ventnor), and Royal Sea Bathing Hospital (Margate).

The distribution would be effected as soon as practically possible, and the list, with details, would be published.

On the motion of the Speaker, it was resolved that the Fund gladly accepts the very munificent offer of Sir Ernest Cassel, and asks Sir Savile Crossley to convey to Sir Ernest Cassel the thanks of the Governors and General Council for his renewed benevolence to the Fund and for the great assistance he had thus rendered to the hospitals of London.

The Speaker announced that to fill the three vacancies on the Council the Governors had elected the following gentlemen: The Hon. Nathaniel Charles Rothschild, Sir Walter Lawrence, and Sir Francis Champneys.

The customary votes of thanks were proposed and accepted.

#### The League of Mercy.

The sixteenth annual meeting of Presidents of the League of Mercy was held during the week before Christmas at

St. James's Palace, where Princess Alexander of Teck, Lady Grand President, made the customary presentations of the Order of Mercy. For the second year in succession the Grand President, Prince Alexander of Teck, was unable to attend, owing to the fact that he was at the front.

Lord Farquhar, who occupied the chair, read a letter which he had received from Lord Stamfordham, Private Secretary to the King. He then said that, notwithstanding the extraordinary way in which the British public had come forward and subscribed for the benefit of our wounded soldiers and sailors and to all the other charitable appeals that had been made, he was happy to say the League would be able to continue its subscriptions to King Edward's Hospital Fund, as well as to the funds of the voluntary hospitals. At the beginning of the year the Council had feared that their efforts would not be so successful as they wished, but in the event they were greatly aided by two schemes—the special film exhibition at the picture houses, originated by Miss Olive Andrews, and the envelope collection from house to house—both of which had been very successful. During the year, their old friend, Sir Frederick Green, had kindly consented to take the position of Honorary Treasurer, and Mr. Arthur Franklyn had been appointed to the post of Secretary, in place of Colonel Kempster, who had been appointed as Brigadier-General to the Command of the 126th Brigade.

The help they were able to extend to the voluntary hospitals was urgently needed, considering how much they had suffered owing to the war. Not only had they, up to October last, taken in 20,000 wounded soldiers and sailors, but the prices they had to pay for necessities, particularly drugs, had very largely increased.

Sir Frederick Green, Honorary Treasurer, stated that during the year they had collected £19,582, which was £620 more than in the previous year. Of this sum, £14,000 was allocated to King Edward's Hospital Fund, and £2,356 as grants to extra-metropolitan hospitals.

Sir William J. Collins, one of the Honorary Secretaries, said that the collection this year was the best since 1911. Since that date they had been under the shadow of the Insurance Act, which was thought by many to have sounded the death knell of the voluntary hospitals. What had happened since the outbreak of war afforded the best vindication of the voluntary hospital system.

#### Hospital Sunday Fund.

The annual meeting of the Metropolitan Hospital Sunday Fund was held on December 20, 1915, at the Mansion House. The Lord Mayor, President and Treasurer, occupied the chair.

The report, the adoption of which was moved by Sir Ernest Tritton, and seconded by the Rev. G. Martin, stated that this year's collection—the forty-third—had produced over £75,646—an increase of £10,246 as compared with last year. The growth of the Fund has been steady and continuous, commencing with the first year (1873), when the amount was only £27,700. The working expenses for 1915 were £2,622, or 3.466% of the gross receipts, as compared with 3.952% last year. The work done by the voluntary hospitals in caring for wounded soldiers and sailors and in training surgeons, doctors, and nurses, as well as providing for the needs of the sick and suffering poor, was well known, and the strain on their resources, though severe, had not yet reached its maximum. The Council therefore commended the cause of these institutions more earnestly than ever, feeling sure that the work was well worthy of the greatest efforts that could be put forth.

On the motion of Sir Henry Burdett, seconded by Sir William Church, it was resolved that the next collection should be on June 25, 1916.

In the Legislative Assembly of New South Wales, on March 21, 1916, Mr. Dooley asked the Premier, without notice, whether he would take into consideration the necessity of drawing up a scale of doctors' fees to apply generally, on account of the high cost of living and the considerable amount of sickness which was prevalent. Dr. Arthur asked whether the Premier would introduce legislation at the same time to compel people to pay their doctors' fees. The

Premier replied that he would be glad to consider legislation for both these objects, and that he invited both honourable members to submit their schemes.

## Proceedings of the Australasian Medical Boards.

### VICTORIA.

Dr. Stewart Macky has been registered under the provisions of the Medical Act, 1915, Part 1, as a duly qualified medical practitioner.

## Books Received.

THE DESCRIPTION OF AN OPHTHALMOSCOPE, BEING AN ENGLISH TRANSLATION OF VON HELMHOLTZ'S "BESCHREIBUNG EINES AUGENSPIEGELS," by Thomas Hall Shastad. A.B., M.D., LL.B., F.A.C.S., Chicago Press, 1916, Royal 8vo., pp. 33.

BACK INJURIES AND THEIR SIGNIFICANCE UNDER THE WORKMEN'S COMPENSATION AND OTHER ACTS, by Archibald McKendrick, F.R.C.S.E., etc., 1916. Edinburgh: E. & S. Livingstone; Crown 8vo., pp. 173. Price, 2s. 6d.

## Medical Appointments.

Dr. Geo. W. F. Paul has been appointed a member of the Queensland Medical Board in place of Dr. Eugen Hirschfeld, who resigned the position some time ago.

Dr. J. C. R. Lind has been appointed Deputy Superintendent of the Parkside Mental Hospital, South Australia, during the absence of Dr. Downey.

Dr. Victor Collins has been appointed Acting Quarantine Officer at Cairns, Queensland, during the absence on leave of Dr. P. J. Kerwin.

## Medical Appointments Vacant, etc.

\*For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xvii.

Texas District Hospital, Queensland, Medical Officer.  
Brisbane Hospital, Resident Medical Officer.  
Royal Alexandra Hospital for Children, Camperdown, Honorary Anæsthetists, Temporary Honorary Relieving Medical Officer.  
Hampden District Hospital, Resident Medical Officer.

## Medical Appointments.

### IMPORTANT NOTICE.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
<b>QUEENSLAND.</b>	
(Hon. Sec., B.M.A. Building, Adelaide Street, Brisbane.)	Brisbane United F.S. Institute. Croydon Hospital. Ladley Hospital, Medical Officer
<b>WESTERN AUSTRALIA.</b>	
(Hon. Sec., 230 St. George's Terrace, Perth.)	Swan District Medical Officer. All Contract Practice Appointments in Western Australia.

Branch.	APPOINTMENTS.
<b>SOUTH AUSTRALIA.</b>	
(Hon. Sec., 3 North Terrace, Adelaide.)	The F.S. Medical Assoc., Incorp., Adelaide.  Department of Public Instruction—New Appointments as Medical Officer, Ophthalmic Surgeon, Ear, Nose and Throat Surgeon, Physician. Australian Natives' Association. Balmain United F.S. Dispensary. Canterbury United F.S. Dispensary. Goulburn F.S. Association. Leichhardt and Petersham Dispensary. M.U. Oddfellows' Med. Inst., Elizabeth Street, Sydney. Marrickville United F.S. Dispensary. N.S.W. Ambulance Association and Transport Brigade. North Sydney United F.S. People's Prudential Benefit Society. Phoenix Mutual Provident Society. F.S. Lodges at Casino. F.S. Lodges at Lithgow. F.S. Lodges at Orange. F.S. Lodges at Parramatta, Penrith, Auburn, and Lidcombe. Newcastle Collieries — Killingworth, Seaham Nos. 1 and 2, West Wallsend.
<b>NEW SOUTH WALES.</b>	
(Hon. Sec., 30-34 Elizabeth Street, Sydney.)	
<b>NEW ZEALAND: WELLINGTON DIVISION.</b>	
Hon. Sec., Wellington.)	F.S. Lodges, Wellington, N.Z.

## Diary for the Month.

- Apr. 4.—N.S.W. Branch, B.M.A., Council (Quarterly).
- Apr. 5.—Vic. Branch, B.M.A., Branch.
- Apr. 7.—Q. Branch, B.M.A., Branch.
- Apr. 11.—Tas. Branch, B.M.A., Branch and Council.
- Apr. 12.—North-Est Med. Assoc. (N.S.W.), Annual Meeting, Lismore.
- Apr. 13.—Vic. Branch, B.M.A., Council.
- Apr. 13.—City Medical Assoc., General Meeting.
- Apr. 14.—S. Aust. Branch, B.M.A., Council.
- Apr. 14.—N.S.W. Branch, B.M.A., Clinical.
- Apr. 15.—Northern Suburbs Med. Assoc. (N.S.W.).
- Apr. 18.—Eastern Suburbs Med. Assoc.
- Apr. 18.—N.S.W. Branch, B.M.A., Executive and Finance Committee, Ethics Committee.
- Apr. 19.—W. Aust. Branch, B.M.A., General.
- Apr. 19.—Western Suburbs Med. Assoc. (N.S.W.).
- Apr. 20.—City Med. Assoc. (N.S.W.).
- Apr. 21.—Q. Branch, B.M.A., Council.
- Apr. 25.—N.S.W. Branch, B.M.A., Medical Politics Committee, Organization and Science Committee.
- Apr. 26.—Vic. Branch, B.M.A., Council.
- Apr. 27.—St. Aust. Branch, B.M.A., Branch.
- Apr. 28.—N.S.W. Branch, B.M.A., Ordinary.

### EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.  
Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.  
All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.